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Volume XVII **Number 10**

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American Pharmaceutical Association

Practical Pharmacy Edition

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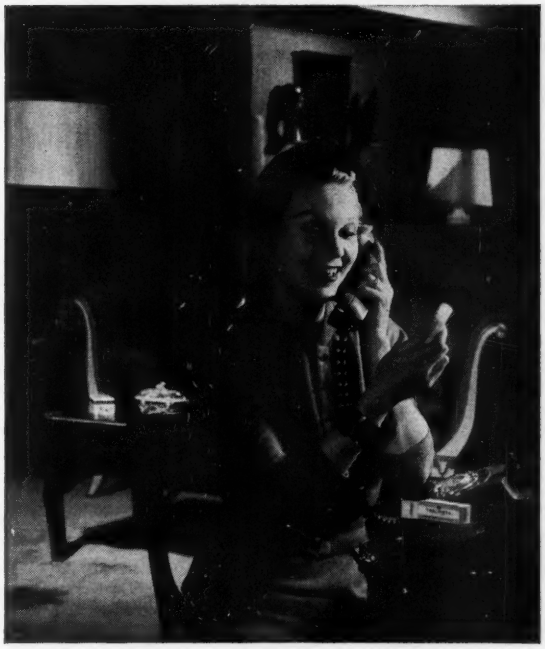

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LETTERS

More on "A Pharmacy Board Appeals"

Sir:

Following is a brief report on Harold Garfield's letter [see THIS JOURNAL, July, 1956, p. 430] addressed to all California legislators, bringing to their attention that a sufficient number of registered pharmacists were not presently available to supply necessary pharmaceutical services to our people and requesting draft deferment for pharmacists and the release of those not serving in their professional capacity.

1. As of July 1, 1956, Harold Garfield had received replies from every legislator. In all cases surprise was expressed as to the condition and letters were referred to the Secretary of Defense for reply.
2. Many copies of letters received from the Secretary of Defense by the legislators have been forwarded to this officer. The following points were clear: (a) Pharmacists are not inducted solely because of their professional background and training; (b) pharmacists are assigned according to the need of the armed services and all are not serving in their professional capacity; (c) present policies of the Department of Defense permit the release of those persons whose essentiality to national health, safety, or interest is established.
3. It was pointed out in one communication that local draft boards could defer those persons whose essentiality to public health, safety, and welfare could be established.
4. Other communications indicated the need for deferment consideration for all pharmacists, in the interest of public health and safety.

It does appear as if this letter has created considerable interest in pharmacy's problem and that California legislators are fully aware of our present shortage. It also appears as if some constructive effort may be made toward correcting this condition.

Numerous letters have since been received from prospective draftees and those seeking release from the armed services because they are not serving as pharmacists. In all cases letters have been written in their behalf and we are anxiously awaiting the results.

Inasmuch as this is a national problem, it is felt that other states in which a shortage of pharmacists does exist should follow similar procedure in bringing this condition to the attention of their legislators.

CALIFORNIA STATE BOARD OF PHARMACY
Floyd N. Heffron, *Executive Secretary*

"Pharmacists in the Army"

SIR:

It was with great interest that I read your recent article "Past and Present Status of Pharmacists in the Army" (August 1956, p. 508). It is encouraging to note that the A.PH.A. is earnestly working toward improving the lot of enlisted personnel who are graduates of colleges of pharmacy. There are many who are assigned duties that are in no way akin to the field of pharmacy. Thank you for your interest and efforts in improving this disheartening situation.

Fort Riley, Kans. — Pvt. DONALD E. BECKER

G.I. Benefits

Sir:

I note on page 204 of the April *Practical Pharmacy Edition* what seems to be a discrepancy in the first and next to last paragraphs. Paragraph one speaks of 7,800,000 veterans having received training benefits, and the paragraph at the bottom states that 26% of the 7,800,000 veterans received training. Perhaps I fail to understand the significance of "all types of training."

Auburn, Ala. — GEORGE M. HOCKING, *Dean*, *Alabama Polytechnic Institute*

Editor's Note: The word "college" was inadvertently omitted. The following statement will clarify the situation:

Under the Korean G.I. Bill, 1,500,000 veterans received training benefits; 51% of these received college training. Under the World War II G.I. Bill, 7,800,000 veterans received training benefits, and 26% of these received college training.

From the A.PH.A. President

Sir:

The following is a copy of my letter of August 27 to the American Association of Textile Chemists and Colorists: "The AMERICAN PHARMACEUTICAL ASSOCIATION is happy to join other participating societies in extending to the American Association of Textile Chemists and Colorists its greetings and best wishes on the occasion of the Perkin centennial.

"It was a happy thought which motivated the Association to sponsor this commemoration of the centennial of William Henry Perkin's momentous discovery which has been responsible for the development of so many new products contributing greatly to the well-being of the human race.

"May we extend our congratulations to those who have conceived and executed this tribute to a brilliant chemist and to the industries which have made use of his discoveries in the promotion of the health, comfort and welfare of people all over the world."

Washington, D.C. — JOHN A. MACCARTNEY, *President*, A.PH.A.

Formulation Studies

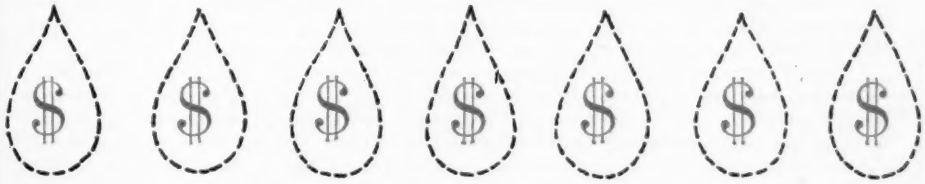
Sir:

Regardless of how stable bacitracin might be in various ointment bases, its therapeutic value can be partly or wholly nullified by its slow release from the product. A comparison of suitable ointment bases for bacitracin has long been necessary. We are pleased that work along these lines has at last been reported.

New York, N.Y. — GILES ST. CLAIR, S. B. Penick & Company

Editor's Note: See J.A.PH.A., *Sci. Ed.*, **45**, 447 (July 1956) and preceding papers.

drop-wise means dollar-wise



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Washington Views

A Proclamation

Whereas since the founding of our Nation, our citizens have zealously worked and sacrificed to provide schools and colleges for the education of our children, our youths, and our adults; and

Whereas the White House Conference on Education held in 1955, with delegates from all the States and Territories, representing millions of citizens of all races, faiths, and walks of life, reemphasized the needs of the Nation for more and better schools and colleges to the end that our people through improved education may make a greater contribution to the progress and future welfare of America, and to the peace and well-being of the world; and

Whereas the setting aside of a special education week each year provides a fitting opportunity for parents and educators and the public generally to visit schools and educational institutions, to express their appreciation of the work of our teachers and school officials, and to exchange views upon educational problems and progress;

Now, Therefore, I, Dwight D. Eisenhower, President of the United States of America, do hereby designate the period from November 11 to November 17, 1956, as American Education Week; and I urge the fullest possible participation in the observance of that week by the people throughout the United States. This week of dedication to education and to the efforts and achievements of teachers, school and college administrators, and others in this important area of public service is especially significant during this first year of appraisal, in terms of local community needs and required action, of the recommendations made by the White House Conference on Education. Let us all stress the need for good schools to keep America strong.

In Witness Whereof, I have hereunto set my hand and caused the Seal of the United States of America to be affixed.

Washington, D.C.
September 5, 1956

Dwight D. Eisenhower

Bradshaw Mintener is resigning as Assistant Secretary of HEW.

The nation's total school and college enrollment will reach an all-time peak of 41,553,000 in 1956-57, according to S. M. Brownell, Commissioner of Education, HEW.

Elvis J. Stahr, Jr., of Lexington, Ky., has been appointed Staff Director of the President's Committee on Education Beyond the High School.

During the last fiscal year, through the State Federal Vocational Rehabilitation Program, a record number of 66,273 handicapped persons were restored to productive employment.

. . . and last-minute news

Polio cases are down 43% this year, according to HEW.

Federal governmental scientific activities in 38 agencies spend more than $2,000,000,000 a year and employ more than 130,000 scientists whereas commercial laboratories and nonprofit research institutes spend $85,000,000 per year and employ 5,000 scientists and engineers, according to a recent survey of the National Science Foundation.

The U.S. Public Health Service has announced awarding of 3,967 grants totaling $48,879,678 to medical schools, hospitals, universities, and other private institutions for research in heart disease (over $10,000,000), cancer (nearly $10,000,000), allergies, arthritis, mental health, and various other diseases.

Dr. John von Neumann of the AEC declares the earth is in a rapidly maturing crisis where the awful possibilities of nuclear warfare are giving way to the even more awful possibilities of global climate control.

The fifth meeting of the Joint United States–Canada Civil Defense Committee will be held at FCDA headquarters, Battle Creek, Mich., October 18–19.

Dr. Theodore J. Bauer, named Deputy Chief of the Bureau of State Services, replaces Dr. Leroy E. Burney, recently appointed Surgeon General of the U.S. Public Health Service.

It is estimated that U.S. citizens paid $303,050,000 for vitamin products during 1955, about 7% more than in 1954.

S. M. Brownell, Commissioner of Education, has announced that more than 500 U.S. and foreign teachers will participate in the 1956–57 exchange program arranged by the U.S. Office of Education.

Dr. Robert J. Anderson has been named Chief of the USPHS Communicable Disease Center, Atlanta, Ga.

It is estimated that 4,910,000 babies will be born in the U.S. next year.

Florida pharmacists are urging that their state reciprocate with other states in the matter of licensure.

LITERATURE

THE NATIONAL FORMULARY X

. . . by Pharmacists for Pharmacists

Prepared by the Committee on National Formulary under the Supervision of the Council, by the Authority of the American Pharmaceutical Association

NOTE THESE FEATURES

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- *Includes monographs on 259 newly admitted drugs*
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THE AMERICAN DRUG INDEX

Prepared by Charles O. Wilson, Ph.D. and Tony Everett Jones, M.S.

The compilation of this new guide was necessary to keep up with the new drugs, drug products and trade names of the past several years. Provides more than 12,000 items arranged alphabetically by generic name and pharmacologic groups, *cross-indexed so you can identify a drug product when only the major constituent is known.* Each listing includes generic name, trade name, manufacturer, composition, synonyms, how supplied, dosage forms, usual dose and indications. Official recognitions are shown. Thoroughly tested — an eminently practical book.

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A Guide and a Survey **2ND EDITION**

By Edward Kremers, Ph.G., Ph.M., Ph.D., Sc.D. and George Urdang, Ph.G., D.Sc. Nat., Sc.D.

A comprehensive record of the progress of pharmacy. Material is divided into four parts: 1 — Early Backgrounds in the Old World; 2 — The Rise of Professional Pharmacy in Europe; 3 — Pharmacy in the United States; 4 — Discoveries, Inventions and Other Contributions to Society by Pharmacists.

622 Pages 30 Illus. $7.50

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Federal *and* State Actions

FDA Actions

Coloring of Oranges—Pursuant to a new 1956 law, coal tar color external D&C Red No. 14 may be used temporarily for coloring the skins of oranges.

Organization—The Food and Drug Administration has been reorganized to consist of the Office of the Commissioner and five bureaus. The Bureaus are designated Enforcement, Medicine, Biological and Physical Sciences, Field Administration, and Program Planning and Appraisal.

Illegal Over-the-Counter Sales (July Actions)

Washington, D. C. (Novelties)—Selling barbiturates without physicans' prescriptions. Fined $500. (Fined $350 in addition for violation of local laws.)

Jonesboro, Ga. (Truck stop)—Selling amphetamine without physicians' prescriptions. Owner and owner's son each fined $100 and placed on probation for 2 years; employee placed on probation for 2 years.

Atlanta, Ga.—Selling amphetamine without physicians' prescriptions. Fined $100 and placed on probation for 1 year.

Cincinnati, Ohio—Selling amphetamine without physicians' prescriptions. Fined $350.

Cincinnati, Ohio—Selling amphetamine without physicians' prescriptions. Owner fined $350; employee fined $150.

Houston, Tex.—Selling amphetamine without physicians' prescriptions. In March, charges against firm dismissed; sentence against individual deferred indefinitely. In July, individual given a 4-month suspended jail sentence and placed on probation for 2 years.

Misbranded Drugs

El Rancho Adolphus Products, Inc.; Scientific Living, Inc.; and Adolphus Hohensee, Scranton, Pa.—Concentrated broth, whole wheat, peppermint tea leaves, wheat germ wheat hearts; wheat germ oil; and herb laxative failed to bear adequate directions for use in the treatment of, among other things, diabetes, epilepsy, pinworms and tapeworms arthritis, gallstones, impaired eyesight and hearing, excess weight, tuberculosis, multiple sclerosis, fits and convulsions, and change of life in men and women; and that they would provide vigor and buoyant health, prevent mental instability and bad temper, and "put off death to the very last minute," for which the products were promoted by Hohensee in "Health Lectures." In January 1955, the defendants were found guilty, but sentencing was deferred pending an appeal and the probation officer's report. In May 1956, the firms were each fined $700; Hohensee was sentenced to serve 1 year and 1 day in jail and was released on $5,000 bond pending appeal.

Wilhelm Reich Foundation, Wilhelm Reich, M.D., and Michael Silvert, M.D., Rangeley, Me.—Criminal contempt of injunction prohibiting interstate distribution of so-called Orgone Energy Accumulators and misbranding literature containing false and misleading therapeutic claims for the treatment of disease. Firm fined $10,000; Reich sentenced to serve 2 years in jail; Silvert sentenced to serve 1 year and 1 day in jail. Defendants released on $15,000 bond each, pending appeal.

FTC Actions

Dex Pharmacal Co.—The Federal Trade Commission has approved a consent order which prohibits the makers of "K & K" cold medicine from claiming this product will cure colds, prevent pneumonia, or generally serve as an effective treatment for respiratory ailments. The respondents are Clemmie L. Carmichael, who trades as Dex Pharmacal Co., and Irving Z. Harris and Pauline B. Harris, partners trading as Veltex Co., United Chemical Co., and T-Lax Products Co., all located in Birmingham, Ala.

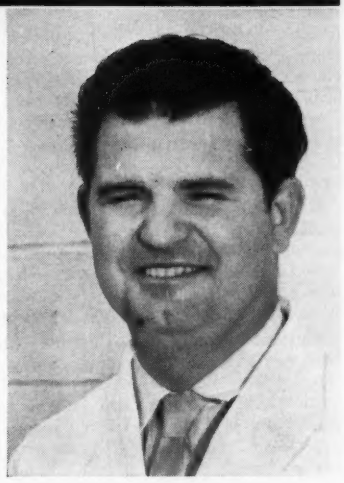
Fairyfoot for Bunions.—An order to cease and desist falsely advertising that bunion plasters ("Fairyfoot for Bunions") were a sensational and miraculous scientific achievement use of which would permanently stop the pain of a bunion, cause the inflammation and swelling to quickly subside, correct the deformity of the foot associated with the bunion, etc. An agreement for a consent order disposing of the issues without hearing was reached with Cyrus Swift and Myrtle F. Swift, individuals doing business under the trade name of Fairyfoot. The order was signed by Robert M. Parrish, Secretary, Federal Trade Commission (*Federal Register*, **21**, 5189 (July 12, 1956)).

Wernet Dental Manufacturing Co., Inc.—of Jersey City, N.J., trading as Hudson Products, and Melvin A. Block, Leonard Block, and Alfred Roberts have been charged with falsely representing in newspapers, circulars, etc., that the drug preparation Sentrol was a new and different kind of pain-relieving preparation, would relieve headaches and pains which other analgesics could not relieve, was three times more effective than aspirin, could not cause stomach upset, and that its ingredient, salicylamide was the most amazing pain-relieving discovery of modern medicine.

ASSISTANT PHARMACIST WANTED

An interesting opportunity in pleasant surroundings is open in Central Pennsylvania to a male or female assistant pharmacist. Applications should be sent to:

Mr. Robert C. Herriman, Chief Pharmacist
The Altoona Hospital, Altoona, Pennsylvania



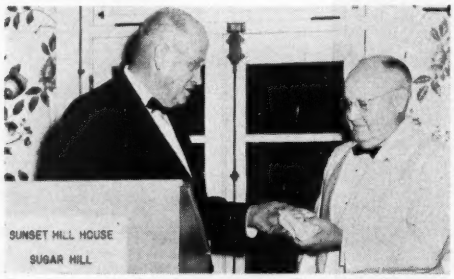
Robert E. Olszewski (Robert's Drug Store, 3323 Fredericksburg Rd., San Antonio, Tex.) says: "The Benzedrex* display carton helped change my wrapping counter into a sales counter. In just a few months those extra 'Benzedrex' sales really add up."

To get the attractive 'Benzedrex' Inhaler display carton, always order in dozens. And remember—you can recommend 'Benzedrex' with confidence. *Smith, Kline & French Laboratories.*

*T. M. Reg. U.S. Pat. Off.

News *and* Notes . .

ASSOCIATIONS



Dr. George A. Moulton, retiring Executive Secretary (rt.), receives Testimonial Award from Major John H. Greenaway at the 82nd annual meeting of the New Hampshire Pharmaceutical Association at Sugar Hill.

American Heart Association, which each year gives Howard W. Blakeslee awards for outstanding reporting in the field of heart disease, announces a special Blakeslee award for *Dr. Paul Dudley White* for "creating better understanding of heart disease." The year's regular Blakeslee award winners are: *Frank Carey,* science reporter, Associated Press; *Nate Haseltine,* science writer, *Washington* (D.C.) *Post & Times Herald; Robert P. Goldman,* science editor, *Parade* magazine; the Science Department, *Life* Magazine; *Howard Whitman,* medical commentator on the NBC-television network; *George Voutsas,* producer-director, and *Earl Hamner,* writer for the radio program, "Courage to Live," broadcast by the NBC Radio Network.

Federal Wholesale Druggists' Association—The annual FWDA meeting, held September 17–19 at White Sulphur Springs, W.Va., heard *Chet Shaw,* Executive Director of the six-month-old Health News Institute, describe its achievements in bringing accurate information on pharmacy and health before the public. *Dr. J. Mark Hiebert,* President of Sterling Drug, discussed the "phenomenal" volume in sight for ethical pharmaceuticals by 1960. In 1955 U.S. pharmacies filled an equivalent of 3.2 prescriptions for every U.S. man, woman, and child.

Hemophilia Foundation—More than 100 of the world's most prominent medical specialists on blood coagulation convened in New York for the International Hemophilia Symposium August 24–25. Half a million men and boys are afflicted with the disease, including some 40,000 Americans.

National Society for Crippled Children and Adults—For the first time in its 35-year history, the "Easter Seal" Society held its annual October convention in the nation's capital. Aids to the handicapped dating from the 1906 antiques to modern prostheses and appliances were on view at the 4-day meeting.

National Conference of State Pharmaceutical Association Secretaries, meeting in Cincinnati at the N.A.R.D. convention, adopted a public relations program on September 16 representing a cooperative effort aimed at the "grass roots" of pharmacy. A committee of State Secretaries is to determine the needed projects, with the state treasuries to be responsible for the costs of distributing material and other functions undertaken within the state. Financial support will come from leading drug manufacturers, to whose public relations facilities the State Secretaries will turn for the material to be supplied gratuitously. And the Conference will be reimbursed for state-wide expenses under an offer made by Market Research Associates to pay a retainer in return for cooperation on an expanded prescription market survey. The Conference further pledged its assistance to the Health News Institute in getting to the retail pharmacist.

New Hampshire Pharmaceutical Association scheduled a home-coming convention for September 9–11 at Sugar Hill devoted to Secretary *George A. Moulton,* who retired October 1 after 21 years of Association work. A.PH.A. President *John A. MacCartney* and Past President *Newell Stewart* spoke on varying aspects of Dr. Moulton's career. Dr. Moulton is himself a Past President of the A.PH.A., being one of the only two such officers to have served for two years.

In 1935 Dr. Moulton introduced his "New Hampshire Plan" which revitalized the Association and inspired others. Serving for 18 years on the New Hampshire Commission of Pharmacy, Dr. Moulton was instrumental in securing enactment of the modern pharmacy laws the state now boasts.

Worcester Foundation for Experimental Biology—A training program stressing theoretical and practical aspects of steroid biochemistry is being offered post-doctoral (M.D. or Ph.D.) and pre-doctoral (B.S., M.S., or equivalent) candidates under the sponsorship of the National Institutes of Health. Final application date is November 1, 1956.

Nearly 500 TV stations throughout the nation received the slide pictured above to be used as a part of the National Pharmacy Week observance (October 7–13). Its subject matter is so important to public health that the A.PH.A. *Public Relations Committee hopes the slide will be used for community health campaigns throughout the year.*

WARNER-CHILCOTT NEWS

Modern Medicine Moves Fast

CAUSE AND CURE DISCOVERED SIMULTANEOUSLY

Warner-Chilcott's New STERISIL Agent of Choice in Vaginitis

MORRIS PLAINS, N.J. — Warner-Chilcott Laboratories has announced release of *Sterisil Vaginal Gel*, a new chemotherapeutic agent for treatment of vaginitis.

Specific Against "Nonspecific"

"Nonspecific" vaginitis was only recently traced to a specific organism—*Hemophilus vaginalis*. Clinical reports now show Sterisil highly effective against this pathogen, as well as against Trichomonas and Monilia.

Opens New Market

A recent survey shows *Hemophilus vaginalis* infections in women are more common than either trichomoniasis or moniliasis. Sterisil promises to open a profitable new market.

High patient acceptance of Sterisil is assured by convenience of appli-

here's your profit picture...

STERISIL® VAGINAL GEL
Brand of hexetidine

	Your Cost	Fair Trade Minimum	Your Profit
1½ oz. tube with 6 disposable applicators	$2.75	$4.59	$1.84 (40%)

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INTERNATIONAL

Great Britain's Sir Hugh Linstead, President of the International Pharmaceutical Federation, has begun a month's cross-Canada speaking tour for the Canadian Pharmaceutical Association which will take him to 25 major centers. He will speak on national health insurance as it affects the English pharmacist.

COLLEGES

George Washington University—*Dr. Robert M. Leonard* has been appointed Assistant Dean of the School of Pharmacy. Newcomers are *Dr. Samuel M. Schwartz* of Manitoba, who will be Assistant Professor of Pharmaceutical Chemistry, and *Dr. Charles J. Kokoski*, of Maryland, to be Assistant Professor of Pharmacy. Serving for a second year as an A.F.P.E. Teaching Fellow will be *Gust G. Koustenis*.

Ferris Institute—A new $1,000,000 Science and Pharmacy Building is scheduled for occupancy during September. This is part of the $10,000,000 building program undertaken after the fire of February 21, 1950.

Idaho State College—Ph.D. candidate *Charles H. Barnstein* has been selected to teach dispensing pharmacy, pharmacy management, and physical pharmacy. *Dr. Donald O. Schiffman* will teach in the Pharmacology Department, and the Pharmacognosy Department will be in charge of *Dr. Franklin R. Cole*.

Philadelphia College of Pharmacy and Science—The 9th consecutive semester for PCPS participation in the University of the Air television program began October 5 and will continue on successive Friday mornings from 9 to 9:20. "You and Your Health" will be the general theme.

Rutgers University pharmacy extension course, held in cooperation with the Pharmaceutical Advertising Club, began September 17 with an address by A.PH.A. President *John A. MacCartney*. Mr. MacCartney, who is Professional Relations Manager for Parke Davis, commented that pharmaceutical manufacturing was "the only industry in the world which is furiously engaged in a continuous effort to work itself out of business" because the control of many diseases has made it possible to discontinue production of remedies formerly used.

Temple University School of Pharmacy includes among its 400 students enrolled this year scholars from India, Iran, Czechoslovakia, Lithuania, and Italy. Dean *Carl M. Grip* addressed freshmen on "Frontiers of Pharmacy in 1960" at orientation exercises held September 17. New faculty members are Dr. *Charles F. Peterson*, Associate Professor of Pharmacy, and *Dr. Harry B. Kostenbauder*, Assistant Professor of Pharmacy.

University of Arizona pharmacy seniors will have the benefit of two new scholarships providing $250 each established by the Ryan-Evans Drug Stores, one award being based on performance as a registered pharmacy intern, and the other on excellence in pharmacy management and business elective courses.

University of California—*Dr. Donald C. Brodie*, Professor of Pharmacy, has been speaking before the Lions Club and other groups on "The Golden Age of Medicine." He tells the story of the development of "wonder" drugs from the start of the 19th century to the present time and concludes that "wonder" drugs are glamorous and easy to take, but the dangers are great; hence the need of a dotor's approval before refilling.

University of Michigan—*Dr. Reuben L. Kahn*, discoverer of the Kahn Reaction for the detection of syphilis, is retiring after 27 years as a professor and director of the Serologic Laboratories. Dr. Kahn will devote his work exclusively to research. . . . The National Vitamin Foundation sponsored a symposium on endocrines and nutrition at the University of Michigan October 11–12.

University of North Carolina Pharmacy Museum, not quite a generation old, exhibits the memorabilia of generations of Southern pharmacists. Among them is a "tonic cup" of bitter wood which when filled with hot water and allowed to steep would, it was believed, cure the ague, headaches, fever, indigestion, and general debility.

University of Pittsburgh School of Pharmacy has received a grant of $2,386.80 from *Hoffmann–La Roche* for an investigation of certain derivatives of thiamine. The study will be conducted under the direction of *Dr. Joseph P. Buckley*, Associate Professor of Pharmacology.

University of South Carolina—*James M. Gentry*, a junior from Easley, will represent, as student delegate to the House of Delegates of the A.PH.A., 13,000 student members of the ASSOCIATION at the 1957 national convention in New York.

Wayne State University (formerly Wayne University)—*Dr. Harold E. Bailey*, Associate Professor of Biological Sciences, was elected President of the Plant Science Seminar for 1957 at the August 20–24 annual meeting, held this year at the St. Louis College of Pharmacy and Allied Sciences. Faculty members attended a variety of meetings this summer, among them the Michigan State Pharmaceutical Association at which Dean *Stephen Wilson* was made an honorary life member; the National Pharmaceutical Association convention held in Detroit, August 2–4, and the Teachers' Seminar at Austin, Tex., July 22–27.

Yale University—Polio protection by inoculations of the Salk vaccine followed by injection of live virus vaccine is being studied by *Dr. John R. Paul* and his associates at Yale University School of Medicine under a grant of $137,524 from the National Foundation for Infantile Paralysis.

Brigadier General M. S. White has been named the new Director of Medical Staffing and Education for the Air Force Medical Service. His headquarters will be in the Office of the Surgeon General at Washington, D.C.

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Schering

MO-J-61-886

▲ *Armour Laboratories' Dr. W. J. Haines (right) greets schizophrenia investigators Drs. R. Heath (left) and B. Leach of Tulane University who are using Armour's facilities to fractionate blood.*

◀ *Cutter Laboratories' new Vice President for Research is Dr. M. G. Van Campen, Jr., well known for his achievements in developing new synthetic organic pharmaceuticals.*

GOVERNMENT

Army—*William L. Austin*, Pharmacy Consultant to the Office of the Surgeon General, has been promoted to the rank of Lieutenant Colonel. Col. Austin has been actively associated with *Col. Bernard Aabel*, Chief of the U.S. Army Medical Service Corps, in improving the standards of pharmaceutical service and the status of pharmacists in the Army.

Federal Civil Defense Administration—In another step designed to increase cooperation between the Red Cross and FCDA, 9 women officials of the American National Red Cross were invited to a special briefing on civil defense programs and operations at the FCDA Battle Creek, Mich., headquarters.

National Bureau of Standards—An automatic file, that can pick one set of fingerprints or a picture out of thousands and automatically make a photographic print of it, has been developed by a Government scientist here. Called an "automatic microimage file," the device is a data storage and retrieval apparatus that provides rapid access to any one of 10,000 information-containing microfilm frames.

U.S. Public Health Service—*Dr. Seward E. Miller*, Chief of the Division of Special Health Services of the Bureau of State Services, has been granted leave of absence to become Director of the University of Michigan's Institute of Industrial Health.

MANUFACTURERS

Abbott Laboratories—Sucreme, a liquid sweetener appearing in groceries and supermarkets, is an infringement of the trade name Sucaryl, charges Abbott in a suit against the Imperial Process Co. of East Springfield, Ill. Abbott introduced its cyclamate sweetener six years ago and this is the first time it has claimed an infringement.

Chemical Rubber Company—Heretofore on an experimental basis in just a few states, the Chemistry Achievement Award program directed at freshman physics, chemistry, and mathematics students, this year for the first time included all 48 states. This year's 7 winners each received $100 worth of scientific books donated in their names to their school libraries.

CIBA has awarded a total of $140,000 during the first 6 months of 1956 to research projects throughout the U.S., bringing to $1,885,000 the research grants awarded by **CIBA** since 1950.

Geigy Pharmaceuticals is using a "tape measure" presentation for its new appetite suppressant Preludin (see *New Prescription Products*, THIS JOURNAL, September 1956, page 612), its sample box having 15 tablets strung out on a 15 inch simulated tape measure.

Industrial Bio-Test Laboratories in Northbrook, Ill., have just completed a new industrial toxicology laboratory which, according to President *Joseph C. Calandra*, will provide comprehensive biological evaluations at a time when new materials and chemicals used by the public are creating problems in public health and welfare. Dr. Calandra offers a booklet describing Bio-Test activities and facilities.

Johnson & Johnson is sponsoring a national "Trip to the Olympic Games Contest," proceeds from which are expected to yield the U.S. Olympic Team a substantial sum of money to help defray the costs of sending our contestants to the Australia Games. Prizes will include an all-expense-paid trip to the Olympic Games, tickets and trips to the 1957 World Series and to a 1957 Bowl game. Among the first-aid items to be donated by J&J to the Team will be Amoply Ammonia Inhalants to guard against recurrences of the climate difficulties experienced at the last Pan-American Games.

Lakeside Laboratories—Stability of prescription specialties under the partial daylight and fluorescent night light prevailing in pharmacy prescription departments will be the special concern of a new Lakeside testing laboratory.

Lederle Laboratories—Another winner of the plaque testifying to having filled the 1,000,000th prescription is the Cermak Drug Company of Cleveland. *Fred J. Cermak*, whose late father, also of the same name, was a second Vice President of the A.PH.A., asserts that 80% of the remedies prescribed today were unknown to him at the time he graduated from Western Reserve in 1943.... *Dr. Benjamin M. Duggar*, 84, whom Lederle employed at the age of 71 after his forced retirement from the faculty of the University of Wisconsin, died September 10. Dr. Duggar discovered Aureomycin at the Lederle Laboratories in 1945.

Lilly—A new $1,000,000 control laboratories building, to go under construction this spring, will give Lilly control staffs, performing assays for safety and quality, space and personnel needed to keep pace with the company's expanding sales.

McNeil Laboratories is expanding its sales force by 20% as a result of a broadened research program and the recent introduction of several prescription specialties.

Magnus, Mabee & Reynard announces publication of a revised edition of its king-size catalogue.

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MANUFACTURERS . . . . . continued

G. F. Harvey Company salesmen were assembled for two days of basic instruction on the new anticoagulant Prothromadin. Left to right: Dr. J. Diamond, Dir. of Research; Dr. S. Shapiro, who conducted the instruction; P. W. Dake, Pres.; E. S. Thomforde, Gen. Mgr.

Mead Johnson & Company Foundation has established an annual graduate fellowship memorializing the late E. Mead Johnson, founder of the firm. The American Foundation for Pharmaceutical Education announces that the 1956–57 recipient of the fellowship is John S. Ruggiero.

Merck & Co., Inc.—*James H. Sharp* relinquishes the presidency of Merck Sharp & Dohme International Division to take over responsibility for developing the parent company's growth and diversification. . . . *James J. Kerrigan*, 62, Chairman of the Merck Executive Committee, died September 5. Starting as a messenger boy with Merck in 1907, he worked his way up to the presidency in 1950, relinquishing it in 1955. In 1952 Mr. Kerrigan received the Horatio Alger Award made annually by the Horatio Alger Awards Committee of the American Schools and Colleges.

The Wm. S. Merrell Company has established a new South Central Sales Division with headquarters in Memphis, Tenn., according to *Frank T. Jacobs*, Vice President in Charge of Marketing.

Parke Davis—Representatives of Canadian government, industry, and health professions joined in dedicating the new P-D $2,000,000 Canadian laboratories at Brockville, Ont. P-D has had a 70-year history in Canada, having constructed that country's first pharmaceutical laboratories at Walkerville, Ont., in 1886. Some of the "firsts" developed there were Adrenalin, Benadryl, and Chloromycetin.

Sterling Drug—For the third successive year Sterling's "Family Medicine Chest Time" will be a feature in pharmacies for the month of February.

Warner-Chilcott Laboratories—*William N. Enes* has been promoted to Sales Manager and *William D. Gulick* has been promoted to Advertising Manager.

Winthrop Laboratories—The American Hospital Association extended honorary membership to *Dr. Theodore G. Klumpp*, Winthrop President, at its 58th annual convention. Dr. Klumpp, who is an authority on chronic illness and rehabilitation problems, was particularly cited for his services on the Commission on Chronic Illness and the Medical Services Task Force of the Hoover Commission.

on the ECONOMIC SIDE

by Charles C. Rabe

Salaries and Hours—and the Demand for Pharmacists

A survey conducted by the AMERICAN PHARMACEUTICAL ASSOCIATION among the Deans of Colleges of Pharmacy shows that the general demand for 1956 graduates exceeded the supply in most fields of employment. Of the 62 respondents, 53 were of the opinion that the demand for graduates for employment in general-type pharmacies exceeded the supply; 42 respondents indicated a similar situation existed in connection with the demand for hospital pharmacists; and 40 replies reflected opinions that demand exceeded supply in the selling and detailing fields and in prescription-type pharmacies. Only 12 felt that demand exceeded supply in the manufacturing area of employment. Five questionnaires carried no answers to this question.

Of the Deans (or faculty members designated by them to supply the requested information) 34 were of the opinion that the over-all demand for this year's graduates was greater than in 1955; 26 felt that there was no appreciable change. None of the replies indicated that the demand was less than in 1955. Two respondents did not give answers.

Salaries and hours were also investigated; however, it must be emphasized that the data obtained represent, in most instances, estimated values.

The questionnaire requested the Deans to estimate the "average number of hours' work per week" for 1956 graduates going into retail pharmacy. Of the 54 who answered the question 21 gave a figure of 48 hours, 20 gave values below 48, and 13 above 48. It is significant to note that 41 out of 54 respondents were of the opinion that the average work week was in the area of 48 hours or less. When asked about the "range of hours" the values given ran as low as 40 hours per week and as high as 65.

Of 53 respondents, 42 were of the opinion that the number of hours' work per week was about the same as in 1955; 10 felt that the work week had shortened; and only one reply indicated a longer average work week than in 1955.

Information obtained in connection with salaries must be interpreted with caution since a number of states now have internship requirements following graduation and before registration. It is evident that this has some effect on starting salaries, at least temporarily. This is shown by the fact that the range of "average starting salaries" for 1956 graduates going into retail pharmacy ran as low as $60 per week to a high of around $150 per week.

The median "average starting salary," based on the replies given this question, was in the area of $90 per week. The most common value given (the mode) was $100 per week.

Twenty-eight respondents were of the opinion that starting salaries for 1956 graduates in the retail field were above the 1955 level, but 27 felt that there had been no appreciable change. Only one reply indicated a feeling that there had been a decrease in starting salaries since last year. Six questionnaires carried no answers to the question.

Although this survey must be placed in the "pilot" category, it does point out and bring into focus the fact that the profession of pharmacy is sorely in need of a comprehensive national survey designed to establish more precise facts regarding the demand for and the supply of pharmacists.

Trading Stamps

The truth about trading stamps is brought out into the open in an article entitled "Trading Stamps—Bonus or Bunkum?" appearing in the October issue of *Readers' Digest*. Most pharmacists have long known what the author, Albert Q. Maisel, points out so well in this article but unfortunately some have succumbed to the current stampede, even to the extent of giving stamps in connection with professional services.

"The overwhelming weight of evidence," writes Mr. Maisel, "seems to indicate that stamp savers usually pay for their premiums—and then some—through higher retail prices." He cites the results of a number of shopping surveys in which it was found that stamp savers paid premium prices for commodities, and in some instances the price increases far exceeded the trading value of the stamps.

Pharmacists faced with trading stamp problems should encourage their patrons to read this revealing article. In many communities it should be feasible for pharmacists to use newspaper advertising space in calling public attention to these "economic facts of life."

Manufacturers' Sales

Most of the major pharmaceutical companies showed significant gains in sales and earnings during the first 6 months of 1956 compared to the same period in 1955 (See Table I).

TABLE I—MANUFACTURERS' FIRST-HALF YEAR SALES

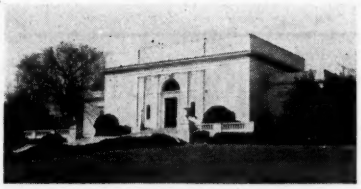
	(In Millions)	
	1956	1955
Abbott	$48.4	$44.9
Lilly	90.0	62.4
Merck	87.1	77.1
Parke-Davis	66.6	59.8
Pfizer	87.2	79.4
Schering	27.2	18.4
Searle	14.1	13.3
SKF	52.9	43.0

Each of the above firms showed increases in "earnings per share." Lilly registered an impressive $2.11 vs. 88¢ during the similar six months' period of 1955; Schering showed $2.65 vs. $1.17.

Although the earnings figures for the first half of 1956 were generally favorable, the Smith Barney Chemical and Ethical Drug Prices Indexes lagged behind the general market in both July and August. Major drug stocks in the ethical field declined in August. The biggest losses were Lilly, 10.3%; Schering, 9.3%; Smith, Kline and French, 7.4%; and Searle, 7.0%.

STRAIGHT FROM HEADQUARTERS

ROBERT P. FISCHELIS, SECRETARY



Successors in the Making

MUCH of what American pharmacy will be in the future depends on what we, who are now the custodians of its ideals and its heritage, will do to provide the necessary education, training, and opportunities for those who are to succeed us.

What kind of a job are the profession of pharmacy and the drug industry doing to perpetuate the high ideals of service to humanity implied in our code of ethics?

To what extent are we providing the necessary inspiration and opportunities to the oncoming generations of pharmacists who are now in training to replace those who must soon retire?

What are we doing to enable those who will be called upon to deal with the production and distribution of the drugs of the future, to meet the new responsibilities which are bound to face them in the years to come?

These are pertinent questions to be raised as our thoughts turn to the 104th birthday anniversary of the AMERICAN PHARMACEUTICAL ASSOCIATION on October 7, the observance of National Pharmacy Week, October 7–13, and American Education week, November 11–17.

Signs of change in the status of pharmacy and the future function of pharmacists are all about us. Indeed, the whole pattern of procedure in supplying medical care and health services is undergoing a profound change as medicine and the allied arts and sciences are striving to keep pace with the unfolding of the miracles of the atomic age.

This issue of our JOURNAL has been dedicated to the pharmacists of the future, their teachers, and the institutions in which they are receiving their education.

In his front cover greeting to educators and students of pharmacy, President MacCartney of the A.PH.A. mentions the abiding interest of the ASSOCIATION in the constant improvement of the facilities for the education of pharmacists and the early contact with the A.PH.A. which is available to pharmacy students through our Student Branches in the 75 accredited Colleges of Pharmacy.

Since 1852 the AMERICAN PHARMACEUTICAL ASSOCIATION has been the chief source of professional guidance for the pharmacists of America. It has endeavored to keep itself in the position of a faithful parent watching over its offspring.

Those coming into the profession today are assured of financial stability for pharmacy's program of education through the efforts of the American Foundation for Pharmaceutical Education.

They are assured of the maintenance of a high standard of excellence in teaching institutions and programs through the efforts of the American Council on Pharmaceutical Education and the American Association of Colleges of Pharmacy.

They are assured of high standards of examination, licensure, and reciprocal registration in nearly all states, through the activities of the National Association of Boards of Pharmacy and the individual state boards of pharmacy.

They are assured also of the continued and constantly strengthened interest of the AMERICAN PHARMACEUTICAL ASSOCIATION in their professional future because they must be depended upon to carry the torch when those who bear it now have completed their term of service. The brief historical sketches of the accredited Colleges of Pharmacy with the photographs of their deans and the seals of these institutions, together with the history of our Student Branch movement found on other pages of this issue, help to convey a source of pharmacy's great strength as a profession.

To the pharmacists now in the making we extend our welcome, our cooperation, and a call to join us in the great health services which we have led the public to expect from us.

Important Business

THE most important business before the AMERICAN PHARMACEUTICAL ASSOCIATION at this time is the completion of plans for an addition to the headquarters building. Many members of the ASSOCIATION have made their financial contribution to the building fund, but it is hoped that by the time of the meeting of the House of Delegates in Washington on November 10 and 11 it can be reported that a majority have made voluntary contributions so that the assessment unanimously voted by the members of the House of Delegates can be minimal.

So many of the services which the ASSOCIATION desires to render would be expedited and improved if space and funds were made available promptly, that we feel no hesitancy in urging everyone who has not yet contributed or pledged to please do so at once.

Will you not join us (now) in making your contribution or pledge available.

The Perkin Centennial

THE 100th anniversary of the discovery of aniline dyes was celebrated during the week of September 10 at the Waldorf-Astoria Hotel in New York City under the sponsorship of the American Association of Textile Chemists and Colorists, and a number of national associations in the chemical and related fields.

William Henry Perkin, who discovered the first synthetic dye while endeavoring to synthesize quinine, has been memorialized by the establishment of the Perkin Medal which has been awarded by the Society of Chemical Industry periodically since 1906 when Sir William H. Perkin himself was the first recipient.

The 1956 award came to Dr. Edgar C. Britton, director of the research laboratory of the Dow Chemical Company, and a past president of the American Chemical Society.

The AMERICAN PHARMACEUTICAL ASSOCIATION was one of the participating societies in the centennial celebration and was represented at several functions by its Secretary.

The ASSOCIATION, in company with the Society of Cosmetic Chemists and the U.S. Armed Forces Institute of Pathology, sponsored a special program on "the application of colorants to drugs, cosmetics, and medicine" during the celebration. Mr. Jack Cooper of Ciba Pharmaceutical Products, Inc. read a paper at this session entitled "The Use of Colorants as Drugs and in Drugs." (See page 640.)

In his message to the sponsors of the centennial A.PH.A. President MacCartney extended "congratulations to those who conceived and executed this tribute to a brilliant chemist and to the industries which have made use of his discoveries in the promotion of the health, comfort, and welfare of people all over the world."

Bernard V. Christensen

THE death of Dr. B. V. Christensen announced on page 675 brings to a close a busy life, devoted in great part to the improvement of the education and professional pursuits of pharmacists. A trained educator before he entered the practice of pharmacy, it was natural that Dr. Christensen should make his principal contribution in studying the educational system of pharmacy and helping to give it direction into channels which would turn out better pharmacists.

He was a disciple of the late Dr. Edward Kremers who supervised the graduate training of many of the leading pharmaceutical educators and deans of the present day. Dr. Christensen, in turn, had seen many of his own graduate students placed in prominent educational and industrial posts during his lifetime. He undertook many thankless jobs in the organizational activities of pharmaceutical associations and carried them through. Notable among these was the chairmanship of the A.PH.A. "Committee of Six" which studied the structure, constitution and by-laws of the A.PH.A. for several years and recommended certain changes which have been adopted and have expedited and improved some of the ASSOCIATION's functions.

Dr. Christensen had the courage of his convictions. He was careful to assemble all the facts that could be helpful in solving a problem and he drew his conclusions deliberately. Having done this he stood by his findings and defended them stubbornly. He was admired by his many friends for his great strength of character and fidelity to the principles and causes which he espoused. We mourn the passing of one of contemporary pharmacy's strongest exponents of equality of professional performance as the best path to equality of professional recognition for pharmacy among the health professions.

William Perkin

The Use of Colorants as Drugs & in Drugs*

by Jack Cooper†

THE sensation of color physiologically mediated through optical excitation of the retina is of the highest psychological importance. In ancient times this aspect of the total environment was considered as a divine force of life and color was closely associated with certain religious practices. It was natural then for the healers and medicine men of antiquity to relate color with disease and, conversely, color with the treatment of disease. Those interesting records of ancient medicine, the Egyptian papyri, record prescriptions compounded with colored materials. In classical Greece and Rome, the viewing of colors in harmonious settings combined with music and poetry was employed as a means of therapy. The modern hospital with its decorator color walls and music distribution system lacks only the poetry to equal this therapeutic concept.

Early Superstition and Modern Psychology

As with other branches of science, the Dark Ages which followed the disruption of the Roman Empire brought little progress to medicine and pharmacy. Superstition and fear of supernatural forces limited the investigation of rational explanations of therapy, and colors were employed to rid the body of evil spirits or to provide a welcome mat for beneficent divine spirits. The flowering of the natural sciences in the 18th century, the invention of the microscope and other tools as well as increasing knowledge of chemistry tended to reduce the importance of color as having direct effects upon the course of a disease.

The present century brought with it a psychological scalpel that cut deeply into the body of many scientific disciplines. Depressed patients were to be made cheerful, low spirits elevated, and symphonies on specific emotional keys played—all with the aid of selected shades of appropriate colors. Enthusiasts of this approach even say that in some cases the presence of the color enhances the activity of the drug by conditioning the patient to its acceptance. Some physicians prescribe colored placebos in liquid or solid form in order to obtain or check a psychological response. The artist's palette—in color range if not in specificity—has moved to the apothecary shop (or more realistically to the pharmaceutical plant) where the pharmacist can utilize his compounding skill to paint therapeutic portraits in vivid hues.

Pharmacy's Debt to Perkin

To the skill, ingenuity, and perseverance of Sir William Perkin, the pharmacist owes much. In fact, the youthful Perkin was engaged in an effort to synthesize the extremely important drug quinine when he first noted the resinous colored precipitate which appeared in one of his reaction flasks. Although it was the custom of most chemists of that period to discard such unpleasant looking materials as impurities, Perkin's curiosity led him forward to purification of the precipitate and the eventual production of *mauveine*.

The discovery of the first synthetic aniline dye and the founding of the important dyestuffs industry soon brought into being a new and spectacular variety of colors with valuable pharmaceutical properties. These new substances were reliable, stable, and compatible with most therapeutic agents. In addition, their highly selective staining and adsorptive properties quickly interested medical researchers who soon found many of them to be useful drugs. Their color properties on further investigation showed them to possess qualities of the greatest importance to pharmaceutical analysts and biochemists. Although omitted from discussion, mention should be made of the tremendous importance of dyestuff intermediates as drugs or in the preparation of drugs.

At the present time natural colors obtained from plant or animal sources are not generally used for therapeutic purposes. However, a great many synthetic dyes have achieved importance as therapeutic or diagnostic agents with the following representing those which are currently listed as official drugs in the N.F., the U.S.P., and the B.P.

Therapeutic and Diagnostic Dyes

Acridine Dyes

In 1889 the dyestuffs industry introduced acridine yellow, the first of a series of acridine dyes which subsequently became important as a source of therapeutic agents.

Acriflavine N.F. and its hydrochloride salt are orange to reddish-brown, odorless, water-soluble acridine dyes originally introduced as *trypanocides* but now used mainly as topical antibacterial agents.

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* Presented Sept. 11, 1956, at The Perkin Centennial, New York City, under the sponsorship of the AMERICAN PHARMACEUTICAL ASSOCIATION.

† Director of Pharmacy Research and Development Division, Ciba Pharmaceutical Products Inc., Summit, N. J.

Solutions are effective against important *pyogenic bacteria* remaining active in the presence of serum, but losing activity in contact with blood or pus. Toxicity resulting from the use of these substances is low and skin idiosyncrasy rare. Acriflavine has been employed as an injection in the treatment of **gonorrheal urethritis** and in bladder irrigations. Prior to the advent of the antibiotic drugs, it was also employed in the treatment of *brucellosis, tularemia, psittacosis, trypanosmiasis,* and *leischmaniasis.*

Aminacrine Hydrochloride B.P. is another acridine dye widely used in Great Britain as an effective antiseptic. Solutions are reported to be active against *hemolytic staphylococci* and *pyocyaneus infections* and are, therefore, used for skin disinfection of contaminated wounds. The dye in a cream base is also prescribed for the treatment of *bacterial cervicitis, vaginitis,* and *trichomonas vaginalis vaginitis.*

Proflavine Hemisulphate B.P. is an orange, odorless, bitter acridine dye, slightly soluble in water, used as an *antiseptic,* but reported to be less irritating and less toxic than acriflavine.

Azo Dyes

Congo Red U.S.P. is a dark red, water-soluble azo dye, used as a diagnostic agent to determine the presence of *amyloidosis,* a disease characterized by the presence of a starch-like protein complex in the blood, a differentiation made possible by the fact that the dye disappears more rapidly from the blood of victims of this disease than it does in normal humans. Other diagnostic uses are: the determination of the *functional capacity of the reticuloendothelial system* which is concerned with the metabolism of iron and other pigments; the differential diagnosis of various *kidney inflammations;* and *estimating blood volume.* Therapeutically, Congo Red has found application in the treatment of *infectious rheumatism,* as a *hemostatic agent,* and as an antitoxin against *diphtheria* and *botulinus.* Combined with streptomycin, it has been used to combat *tuberculous meningitis.*

Evans Blue U.S.P. is a bluish-green, water-soluble azo dye employed as a diagnostic agent to *estimate blood volume.* A known quantity of the dye is injected in the blood stream and after allowing time for mixing, a determination of the concentration of the dye in a sample of withdrawn blood enables the physician to calculate the volume of blood in the patient.

Scarlet Red N.F. is an oil-soluble, dark brown, odorless azo dye which has been used in clinical medicine and surgery since 1906 when Fisher discovered that it stimulated the growth of epithelial cells. Ordinarily applied in the form of a 4–8% ointment, the dye has been used in the treatment of *chronic ulcers, bed sores,* and *burns,* and for *surgical repair.*

Phthalein Dyes

Fluorescein Sodium U.S.P. is an orange-red, odorless, water-soluble dye of the fluorescein family widely used as a diagnostic agent in medicine and surgery. In *locating lesions of the cornea,* a 2% solution is dropped into the eye and because of selective staining the denuded epithelial areas will show a green coloration, while the healthy portion of the cornea will remain unstained. The solution is also helpful in *locating foreign particles* imbedded in the eye or pharynx. The dye has been used to *delineate the gall bladder and bile ducts* during surgical procedures upon these structures. Considerable work has been done using fluorescein sodium to *localize brain tumors* and more recently radioactive diiodofluorescein has been employed for the same purpose.

Iodophthalein Sodium U.S.P. is a pale blue-violet, water-soluble dye belonging to the phthalein group first isolated in 1871. When this substance is administered orally or by intravenous injection, a sufficient quantity is concentrated in the *normal gall bladder to visualize* the organ on an x-ray plate. The same dye has also been used to *determine liver function* since most of the substance is excreted by this organ when it is functioning normally.

Merbromin, another fluorescein dye is better known to the layman as Mercurochrome. This red-staining dye is a nonirritating, moderately active antibacterial agent generally used in the treatment of *small wounds.* Dissolved in a water-alcohol-acetone solution, it is frequently used for *preoperative skin disinfection.*

Phenolsulfonphthalein U.S.P., another phthalein dye, is used diagnostically to test the *functional capacity of the liver* by measuring the rate at which

The Perkin Centennial

During the week of September 7, the 100th anniversary of the discovery of mauveine (Perkin's purple) by Sir William Henry Perkin was commemorated, with the A.PH.A. and dozens of other national scientific and professional organizations participating (see Letters, page 622).

As so frequently happens with many great discoveries, when Sir William produced the first coal-tar dye by oxidizing aniline in the presence of toluidines as impurities during investigations which he believed would lead to the synthesis of quinine, no one appreciated the significance of the dirty purple precipitate in his apparatus. Scientific curiosity prevented the undesired by-product from being discarded, and the result has been the replacement of colored extracts from insects (scarlet of the 38th chap. of Genesis), flowers (saffron), leaves (indigo), shellfish (Tyrian purple), and other natural sources, many of which were not permanent in sunlight and washing, with mass-produced, pure, synthetic, permanent dyes.

This mass production has reduced the prices of dyes from the $150.00 per pound (present equivalent) cost of Tyrian purple to the current figure of $1.17 per pound average price of all dyes now manufactured.

The technical, social, economic, and political impacts of the discovery of coal-tar dyes are so powerful and so far-reaching that the dozens of papers presented during the Perkin centennial program only provided glimpses of the whole picture. The shifts in industrial development have been tremendous—and none is so striking as the shift from European monopoly of the dye industry at the turn of the century to America's present-day unsurpassed production. Impressive is the vast change from the few colors afforded only by royalty to our annual output of 150,000,000 lbs. of coal-tar dyes ranging through a spectrum of 1,000 different colors.

the dye appears in the urine of a patient following intravenous injection. However, the preservation of this dye excretion function does not mean that the kidney is perfectly healthy and more sensitive tests are beginning to replace this procedure.

Sulfobromophthalein Sodium U.S.P., also a phthalein dye, is used as a test for the *functional capacity of the liver* by determining the length of time the dye remains in the blood. The rapidity of excretory function of the liver is considered to be proportional to the rate of disappearance of the dye from the blood. Not more than 15% of the dye remains in the blood 30 minutes after the injection in patients with normal liver function.

Rosaniline Dyes

Gentian Violet is the triphenylmethane or rosaniline dye most widely used in therapeutics. It is a dark green, water-soluble powder. This dye is an important antibacterial, antifungal, and anthelmintic substance. Investigators have shown it to be active against *staphylococci, B. diphtheriae,* and *B. pyocyaneus.* It inhibits the growth of the organism causing *Vincent's angina* as well as many *molds.* Locally the dye is nontoxic but taken orally, it may cause nausea, vomiting, diarrhea, and lassitude. Therapeutically, it is prescribed for *impetigo, furunculosis,* secondary infections of the skin and fungus *infections of the skin.* Other conditions treated by local application are *pruritus ani, thrush, leukorrea burns,* and *ulcers.* Orally it is commonly used to treat *pinworm* and certain *fluke infestations.*

Basic Fuchsin N.F. is another medicinal rosaniline dye which in the solution known as Castellani's Paint is used as an antifungal agent against *athlete's foot* and *ringworm.* **Brilliant Green B.P.,** preparations of which are used as antiseptics, is also a rosaniline dye.

Miscellaneous Official Dyes

Methylene Blue N.F. is the most important of the miscellaneous coal-tar dyes used in therapeutics. This, the first colorant to be used as an antiseptic, still has some advocates for its use as a *genitourinary antiseptic* administered internally or by irrigation. The ability of the dye to change hemoglobin to methemoglobin has been utilized in *treating cyanide poisoning* since cyanide combines with methemoglobin to form a nontoxic compound. Because of its staining properties, methylene blue has been used for *outlining sinus tracts and fistulae; for determining the patency of the fallopian tubes;* and similar purposes.

Sodium Indigotinsulfonate U.S.P. is employed intravenously as a test for *kidney function.* The rate of excretion of the dye in the urine is determined colorimetrically and compared with standards.

Nonofficial Dyes

Of the medicinal dyes which are not official in the U.S.P., N.F. and B.P., a number have widespread use. Among these are **Pyridium** and **Serenium,** both active *urinary antiseptics;* **Flavicid** and **Rivanol** as surgical *germicides,* **Adrenosem** as a systemic *hemostat* and **Direct Sky Blue** for vital *staining of lymph nodes* during surgery.

Coloring of Foods and Drugs

The addition of color to pharmaceuticals to enhance appearance or for identification is common practice and apparently significant in consumer or patient appeal. All sorts of expressions and attitudes such as "pink pills for pale people" testify to this opinion. Pills, capsules, and tablets are brightly colored, and it is not unusual to find some with two or three colors in layers or bands. One tablet on the market today has a spatter effect with vari-colored points of color on a white background. The popular sugar-coated tablets permit the application of a high degree of gloss to colored tablets. Objections have been raised to the employment of colors in tablets since children may assume they are candies and eat them with dangerous results. However, there is little objective evidence to support this reasoning, and it appears to be more logical to keep all medicines out of the reach of young children. In England tablets which are official in the B.P. must not be colored but opposition to this restriction is developing.

Choice of Color

Colors are generally used in manufacturing elixirs and syrups with certain preferences in relationship to the flavor employed. With mint flavors, green is usually selected; with cherry, strawberry, or raspberry, a red or pink color; and with lemon, the customary light yellow. In spite of statements that color must always complement flavor for taste preference, recent panel studies indicate that flavor rather than color is the predominating factor in establishing preferences.

In view of the well-known use of colors in cosmetic preparations, it is not surprising to find similar use made of colors in dermatologic preparations of medicinal creams and lotions. In most of these preparations, natural pigments such as those present in calamine, iron salts, and so forth, are employed.

Although colors in foods and drugs preceded the discovery of mauveine by Perkin, the advent of the synthetic coal-tar colors was followed almost immediately by their use for this purpose. The concern of the United States Government with colors in foods arose out of doubts relative to the harmlessness of the dyes and whether or not they were used to deceive consumers as to the quality or identity of the product. Twenty years after Perkin announced his synthesis of the first aniline dye, Congress legalized the addition of coloring matter to butter. In the Appropriation Act of May 25, 1900, for the Department of Agriculture, an item was included "to enable the Secretary of Agriculture to investigate the character of proposed food preservatives and coloring matters, to determine their relation to digestion and health and to establish the principle which should guide their use." The Food and Drug Act of June 30, 1906, included a regulation to the effect that only harmless colors could be used in food products and certification of such colors actually began on April 1, 1908.

Certified Colors

The Food, Drug and Cosmetic Act of June 25, 1938, states that only certified coal-tar colors may

be used in foods, drugs, and cosmetics with this requirement to be effective one year later. A series of conferences with food, drug, cosmetic, and color manufacturers took place, and it was found that about 300 different substances were in actual use. After a number of hearings at which scientific evidence concerning the safety of various colors was presented, the amended regulations were published in September 1940. This publication describes the colors which may be certified and gives the chemical name of each and the specifications for its certification.

At the present time there are 16 certifiable FD&C colors which may be used in foods, drugs, or cosmetics, 68 certifiable D&C colors which may be used only in drugs or cosmetics, and 33 certifiable External D&C colors for use in drugs or cosmetics intended only for app ication to the skin. Besides meeting the detailed specifications for each certified color, limits have been placed on permissible percentages of lead, arsenic, barium, and other heavy metals. In addition to the usual control exercised by the dye manufacturer, samples of every batch are forwarded to Washington where they are tested and given a certification number if approved. Such colors are considered as harmless and suitable for appropriate use in foods, drugs, and cosmetics. One of the oldest restrictions frequently upheld by the courts is that no artificial color, certified or otherwise, may be used to make an article appear to be of better quality than it really is or to conceal damage or product inferiority. Another restriction in the drug field is one outlawing the use of any coal-tar color in the area of the eye. Products containing coal-tar colors imported into the U.S.A. and intended for use as foods, drugs, or cosmetics must use only certified FDA colors.

Colors Decertified

Last year the Food and Drug Administration on the basis of animal experimentation withdrew three colors from the certifiable list of food and drug dyes intended for other than external application. Objections were raised that the quantities administered to the animals were very high and not related to possible amounts ingested by man. The Administration admitted that there was no evidence on which findings could be made concerning how much of the three colors is likely to be ingested or absorbed by man from his food, drugs, and cosmetics. However, there exists no authority to limit a color, once certified, to a single food or drug, and there is no means of controlling the amounts of colors used in a variety of food, drugs, and cosmetics. The Administration, therefore, deleted these colors from the FD&C list and added them to the External D&C group, a decision which has been challenged by a drug manufacturer and is now under adjudication in the courts.

Color in Laboratory Investigations

To the pharmacist and analytical chemist concerned with the identity, purity, and potency of a drug, the discovery of the aniline dyes was a major step forward. Although colorimetric analysis was used by the Greeks to detect the presence of alkalies in natural water through the decoloration of red wine, the availability of the enormous battery of new colors extended the applicability of this technique to the analysis of many metals, nonmetals, and nearly all classes of organic compounds. The analyst uses over 40 dyes as indicators to determine the acidity or basicity of a product and from these data he calculates the concentration.

Naming of Colors

One of the first groups actively to undertake simplification and standardization of the descriptive names for colors was the pharmaceutical profession. Both the AMERICAN PHARMACEUTICAL ASSOCIATION and the *U.S. Pharmacopeia* recognized the importance attached to the correct designation of color. The Twelfth Session of the United States Pharmacopœial Convention was the occasion for an exhibition and a meeting on May 14, 1939, arranged for the purpose of drawing attention to the inadequacy of the existing system of color names. This conference played a leading role in the formation of the Inter-Society Color Council which encouraged the National Bureau of Standards to refine its method of designating colors. In 1940 this method was published as a solution to the problem presented by Dr. E. N. Gathercoal, the first chairman of the Inter-Society Color Council, and last year an excellent revision of this method "The ISCC-NBS Method of Designating Colors and a Dictionary of Color Names" was published.

Tribute to Sir William Perkin

Almost one hundred years elapsed between Perkin's purple and the 7,500 color names described in the ISCC Dictionary—a century filled with great names in chemistry, biology, and medicine. Many of the greatest did not realize the debt which they owed to this brilliant and energetic scientist. In this era of sulfonamides, antibiotics, and tranquilizers, the members of the pharmaceutical profession honor the memory of the man whose initiative gave birth to the synthetic dyestuffs industry from which came so many valuable drugs and important drug companies. As research continues unabated many new dyes will find their way into therapeutics, some because of their inherent pharmacologic effects and others to brighten the appearance of the medicines. It was indeed fortunate that Sir William Perkin lived to see the transition of part of the dyestuffs industry from the manufacturing of products for milady's fashions to the exciting safari leading to conquest of disease.

A Milestone in Medicine . . .

The POLIOMYELITIS *Vaccination* PROGRAM

by Jack C. Haldeman, M.D.*

WITH announcement of the successful results of the 1954 field trials of Salk poliomyelitis vaccine, a new weapon was added to the public health armamentarium, and poliomyelitis joined the list of preventable communicable diseases.

Public health experience had shown that the most successful battles against specific communicable diseases had been waged through mass immunization programs. For example, as early as 1915 seven state health departments were furnishing diphtheria antitoxin free to all persons within the state, another 7 were providing it free for those who could not afford to pay, and in 11 more, municipalities or counties were required by law to furnish antitoxin "to the poor." A quarter of a century ago, several states were making specific appropriations for the purchase of antitoxin, vaccines, and sera for distribution throughout the state. By that time many health departments had undertaken to immunize whole communities against typhoid fever and diphtheria. Since then that pattern has become more firmly and widely established. The dramatic decline in illness and death from these diseases is impressive evidence of the effectiveness of such community-wide programs.

Based on this experience, the first mass poliomyelitis vaccination program in this country was launched during 1955. The extraordinary progress achieved to date in providing at least partial immunization to the most susceptible population is a tribute to the working partnership of local, state, and Federal governments; voluntary agencies; the medical and pharmaceutical professions; the drug manufacturers; and individual citizens.

* Chief, Division of General Health Services, Bureau of State Services, Public Health Service, U.S. Department of Health, Education, and Welfare, Washington, D.C.

A brief review of this program and of the manner in which some of the problems associated with it have been solved may be of value in handling similar programs in the future. The discussion will be focused primarily upon supply, distribution, and use of the vaccine—with only brief reference to the technical aspects of production, testing, and clearance of vaccine.

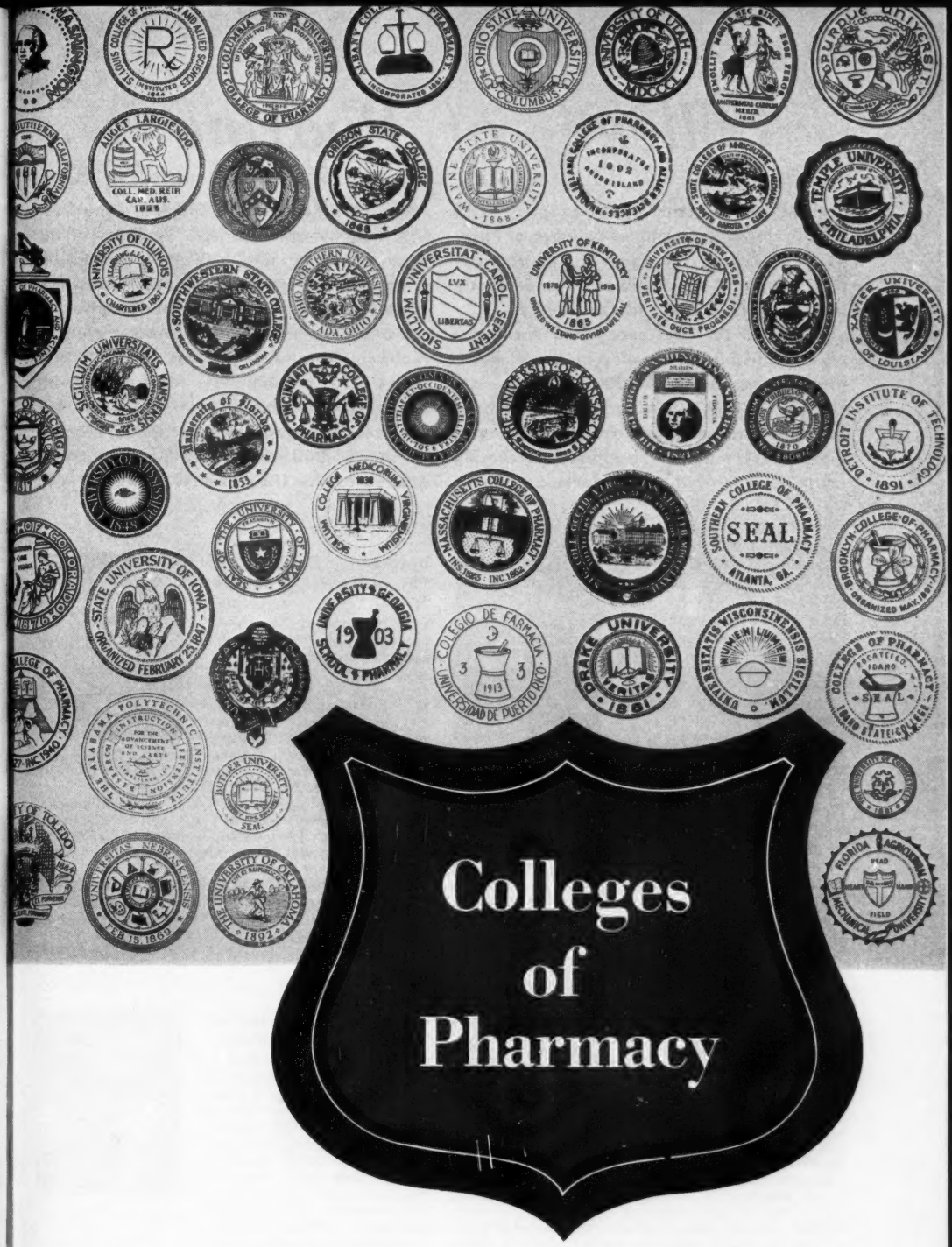
EFFECTIVENESS AND SAFETY

Under the Biologics Control Act, responsibility for the licensing of vaccine manufacturers and for releasing their products has been placed in the National Institutes of Health of the Public Health Service, Department of Health, Education, and Welfare. In carrying out this responsibility, minimum requirements governing production procedures and testing methods of the manufacturers are established by the Public Health Service.

Testing performed by the Public Health Service is carried out concurrently with testing by the manufacturers. It is possible, therefore, to release vaccine as soon as complete data on details of preparation and testing have been furnished by the manufacturer.

Since late April of 1955 the National Poliomyelitis Surveillance Program of the Public Health Service has served as a clearinghouse for the collection, consolidation, and dissemination of significant information concerning the occurrence of poliomyelitis in vaccinated persons. This program has been concerned with two main problems: the epidemiologic evaluation of the safety, and the measurement of the effectiveness of the vaccine. Headquarters of the program are located at the Communicable Disease Center

(Continued on page 679)



Brief Histories of the 75 Colleges of Pharmacy Accredited by

The American Council on Pharmaceutical Education

Colleges of Pharmacy

American Pharmacy is justly proud of its 75 Deans and accredited Colleges of Pharmacy which supply some 3,500 pharmacists annually to a profession constantly increasing in scope and complexity.

Photos of the 75 Deans, who each year are responsible for developing broad backgrounds for some 17,000 students, are shown on the following pages and brief histories are provided for the Colleges. The A.PH.A. takes great pride in numbering some 13,000 of these students among its Associate Members in Student Branches.

A lengthy and intensive program of indoctrination, training, and study is required to prepare the embryo pharmacist for a life of service in the profession he has chosen, but a college is available to satisfy every requirement and registrants of all but 3 states are eligible for reciprocity with every other state. Most students are destined to engage in prescription practice in the 55,000 retail and hospital pharmacies in the U.S. Many, however, will

Dean L. S. Blake

Alabama Polytechnic Institute, Auburn, Ala.— Established in 1857, the Alabama Polytechnic Institute is Alabama's land grant college. The instruction division has 10 schools with an annual enrollment of over 9,000 students; about 60 are foreign students. A Department of Pharmacy was established in 1895 and the first Ph.C. degree was awarded in 1896. The curriculum for the School of Pharmacy was separated from the School of Chemistry in 1941 and L. S. Blake was named Dean. The course for a B.S. degree required four years. A postgraduate curriculum led to the degree of Pharmaceutical Chemist. Auburn now offers graduate work leading to the Bachelor of Science degree in pharmacy, pharmaceutical chemistry, pharmacology, pharmacognosy, and pharmaceutical economics.

Dean A. G. Zupko

Brooklyn College of Pharmacy, Brooklyn, N.Y.— A charter was granted in 1886 by the New York State Legislature allowing this college to confer the degree of Graduate of Pharmacy (Ph.G.). The charter was later amended, giving authority to confer the degree of Doctory of Pharmacy (Phar.D.), and still later permission was granted by the State to confer the degree of Pharmaceutical Chemist (Ph.C.). The college continued to operate independently until 1929, when it merged with Long Island University which now grants degrees of B.S. in pharmacy (B.S. in Pharm.). The college is a nonprofit institution governed by a Board of Trustees who are elected by the Kings County Pharmaceutical Society, which was organized and chartered in 1877. Approximate annual registration is 590.

Dean F. J. O'Brien

Albany College of Pharmacy, Albany, N.Y.— Founded in 1881 as part of Union University, this college is located in Albany next to the Medical College and the Law School. Approximately 3,500 students have been graduated during the 75 years of its existence and the present student body numbers 350. The Diamond Jubilee Wing now being constructed will increase the student capacity to 500. About 10% of the student body of this coeducational college has been women, and at present this percentage is considerably higher. Courses offered lead to the degrees of B.S. in Pharmacy and B.S. in Medical Technology, with majors offered in pharmaceutical administration, pharmacology, pharmacognosy, and chemistry. Albany, the capital of New York State, offers many advantages for students, with its State Library, State Museum, and many fine parks.

Dean K. L. Kaufman

Butler University College of Pharmacy, Indianapolis, Ind.— The College developed from the merger of Indianapolis College of Pharmacy with the University in 1945. In 1904 the independent school was chartered and enrolled 12 local students. The College now has 165 undergraduate and 8 graduate students from several states and 6 foreign countries. In addition, there are approximately 100 pre-pharmacy students on campus plus numerous others who are taking this work at other institutions. The college enjoys a fine new building and equipment with a full-time staff of 10, of whom 8 hold the Ph.D. degree, plus 5 part-time teachers. In addition, the College of Liberal Arts and Sciences furnishes instruction in the basic sciences and humanities.

serve in industry, education, the military, government service, or one of the many fields related to pharmacy.

From every college, in addition, springs the handful of executives, the administrators who will in future years assume the leadership of the profession and utilize to best advantage the numerous disciplines represented in the health, the scientific, and the allied professions. The challenge confronting the Colleges and Deans shown on the following pages has never been greater.

Columbia University, College of Pharmacy, New York City—Affiliated since 1904 with Columbia University, the College of Pharmacy of the City of New York has been continuously active as a teaching institution since its founding in 1829. In 1851, delegates from the three other Colleges of Pharmacy then in existence were invited to meet to consider the establishment of broad standards. A second meeting in Philadelphia in 1852 led to the birth of the AMERICAN PHARMACEUTICAL ASSOCIATION. Since 1897, the College has offered graduate study. The present program offers specialization in control, manufacturing, product development, pharmacognosy, pharmacology, microbiology, and synthetic medicinal chemistry. During the 1955–56 academic year, 377 undergraduate and 31 graduate students, including 11 special foreign students, were in residence.

Dean E. E. Leuallen

Creighton University, College of Pharmacy, Omaha, Nebr.—Established in 1905 at the crossroads of the nation, this was the first such college in Nebraska to become an integral unit of a university. Its building joins that of the School of Medicine, which provides many advantages to both. Curriculum changes over the years indicate the general rise in the standards of pharmaceutical education in the U.S. With the entering class of 1957, two years of pre-pharmacy will be required for admission to the 3-year curriculum in pharmacy. Its total enrollment is approximately 150 students, among whom are 7 foreign students. The College is co-educational and admits persons of all faiths and races. Its aim is to educate students proportionately with a view to their physical development, social adequacy, intellectual expansion, and business acumen.

Dean W. A. Jarrell

Detroit Institute of Technology, College of Pharmacy, Detroit, Mich.—The Detroit Institute of Technology became a corporate reality in 1891 as an educational division of the Detroit Young Men's Christian Association. The Detroit College of Pharmacy became part of the program in 1907. The total enrollment for the Detroit Institute of Technology will be approximately 2,000 students for the fall of 1956. Of these, approximately 175 will be in the College of Pharmacy. Women students had attended in the early 20's, but subsequently the Colleges had been restricted to men. In 1942, due to the training demands of World War II, co-education became an established policy. War courses were discontinued in 1945, but enrollment figures remained at an all-time high, and a new era of development was begun to meet the needs of a growing college.

Dean J. V. Crandall (Acting)

Drake University, College of Pharmacy, Des Moines, Iowa—The College dates back to 1887, when the Iowa College of Pharmacy was established in Des Moines. Not until 1902 was there an affiliation with Drake University. This affiliation was dissolved shortly after in 1906. An independent College of Pharmacy was formed in 1927, when Highland Park College and Des Moines University merged their Colleges of Pharmacy. The new College, called the Des Moines College of Pharmacy, remained independent until 1939, when the educational program, equipment, and faculty became an integral part of the University, and became known as the College of Pharmacy of Drake University. In 1949, the Fitch Hall of Pharmacy was completed as part of the new campus plan. Total enrollment is 175, and degrees awarded are the B.S. in pharmacy and the M.S.

Dean B. E. Benton

Duquesne University College of Pharmacy, Pittsburgh, Pa.—The late Dean Emeritus Hugh C. Muldoon founded the School on April 20, 1925. Its establishment represented the first unit of a projected health profession group which was included in the long-range planning of the Congregation of the Holy Ghost who founded and govern Duquesne University. In the early years, all students followed a standard 3-year program leading to the Graduate in Pharmacy degree. In 1932, the Ph.G. course was withdrawn nationally, and after 1936 the 4-year B.S. curriculum became the minimum requirement. A graduate program leading to the M.S. degree in the pharmaceutical sciences was inaugurated in 1951. Total enrollment is approximately 250 and includes students from 13 states, Puerto Rico, Pakistan, and India. Since 1925, 775 degrees have been granted.

Dean J. G. Adams

Ferris Institute, College of Pharmacy, Big Rapids, Mich.—Ferris Institute was established on September 1, 1884, by the late Woodbridge N. Ferris. From 1884 to 1931, it was operated as a private proprietary institution. From 1931 to 1950, it was operated as a private nonprofit institution governed by a Board of Trustees who served without pay. On July 1, 1950, it became a State College. Mr. Ferris described the school as "an institution which prepares young men and women for the actual duties of life." In 1893, the beginnings of a Pharmacy Department were made, with one student in attendance, Mr. Ferris as teacher, and an early edition of *Remington's Practice of Pharmacy* as the text. By January, 1902, there were 100 students enrolled in the Pharmacy Department. The Institute is currently going through a period of phenomenal growth and development.

Dean C. A. Andreson (Acting)

Florida Agricultural and Mechanical University, School of Pharmacy, Tallahassee, Fla.—This School was founded by legislative enactment in 1951. When first organized, the 12 students and 2 full-time faculty members shared facilities with the Biology and Chemistry Departments. In 1955, the School was moved into the new Science-Pharmacy Building. The second floor was designed specifically for pharmacy. In 1954, two students received the B.S. in Pharmacy degree. Since that time 4 other students have been graduated. Enrollment for 1955–56 reached an all-time high of 48 students. The Florida Agricultural and Mechanical University, School of Pharmacy, under the presidency of George W. Gore, Jr., recently was accredited by the American Council on Pharmaceutical Education and thus became the most recent one to be accredited.

Dean H. McClain, Jr.

Fordham University, College of Pharmacy, New York City—This College was founded in 1911 under the leadership of Dr. Jacob Diner, the first Dean. Two-, 3-, and 4-year courses were offered during the early period in the College's history. In 1927, the 2-year course was discontinued, and in 1937 the 4-year course became mandatory. In 1932, because of ill health, Dr. Diner was succeeded by Dr. James H. Kidder. During World War II, the College offered courses in First Aid, and was designated an emergency Medical Aid Station. In 1955, Dean Kidder was appointed a Special Assistant for Reserve Affairs to the Surgeon General of the Army. He resigned as Dean in 1956 because of military duty, and was succeeded by Dr. Albert J. Sica. For the 1955–56 academic year, the College enrolled 471 students, about 10% of whom were women.

Dean A. J. Sica

George Washington University, School of Pharmacy, Washington, D.C.—This College, the sixth oldest School in the country, was organized in November 1872 as the National College of Pharmacy by a group of Washington and Georgetown (then a suburb of the nation's capital) apothecaries. These men, organized into the Apothecaries' Association of the District of Columbia, in 1867 sponsored legislation for a charter and laid the cornerstone for the first building to house the College. In 1906, the College affiliated with the George Washington University but remained separate in that organization until 1920, when it became the present School of Pharmacy of GWU. The University itself, founded in 1821, is the 11th oldest institution of higher learning in the country and was inspired by the first President, George Washington.

Dean C. W. Bliven

Howard College, Division of Pharmacy, Birmingham, Ala.—This College was established in the fall of 1932 with Prof. James Brakefield at the head. Dr. A. R. Bliss took over the Department in 1934. After his death in the spring of 1942, Dr. C. Lee Huyck was made Director. Dr. Woodrow R. Byrum accepted directorship following the resignation of Dr. Huyck in the summer of 1952. The faculty was expanded and the curriculum revised to conform to the modern trends in pharmaceutical education. During 1953, ground was broken for the spacious new Howard College campus. The recently completed Ingall's Building will be the new home of the Division of Pharmacy. The new campus, scheduled for occupancy in the fall of 1957, is air-conditioned throughout. Total enrollment is 197, including 2 men from Jordan, 1 from El Salvador, and 27 women.

Dean W. R. Byrum

Howard University, College of Pharmacy, Washington, D.C.—The College was organized in 1868 and graduated its first class in 1870. Oscar Oldberg, a Washington pharmacist, was the first lecturer in "Practical Pharmacy." The initial course, first offered in the evening, gradually became more extensive until in 1932 the 4-year curriculum was adopted as the minimum requirement. Since its beginning the College has kept pace with the best in pharmaceutical education. The growth of the University and the College has been made possible principally by Federal appropriations and private philanthropy. The College has facilities for 200 undergraduate students and also contains additional space for a graduate program. Training in practical dispensing is afforded pharmacy students under the competent supervision of a pharmacist at Freedmen's Hospital.

Dean C. I. Cooper

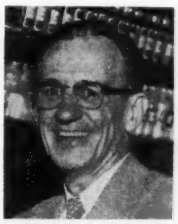
Idaho State College, College of Pharmacy, Pocatello, Idaho—This College was established by the Idaho State Legislature at its 1918 session. The first classes in pharmacy were offered in 1920. Through the encouragement of the administration of Idaho State College and the people of the State of Idaho, the College has grown steadily. Yearly enrollment is approximately 220 students. The College is housed in a new well-equipped and spacious building. In 1956, students were permitted to select either a 4-year or a 5-year program of professional education. Hereafter, the 5-year program will be mandatory. It is one of the first Colleges established in the Rocky Mountain area and has a history of 36 consecutive years of service to the entire intermountain West. It provides education and training for the practice of pharmacy on a high professional level.

Dean L. E. Gale (Acting)

Medical College of South Carolina, School of Pharmacy, Charleston, S.C.—The School was organized in 1882, but was discontinued at the expiration of two years. In 1894, ten years later, the Department was resumed under the amended charter of 1881, from which time it has had its growth within the Medical College. The School was the first of its kind in the South. At the present time, it is located in the Laboratory-Clinic Building, which was completed in 1952 and contains in addition to Pharmacy, the Cancer Clinic, Cancer Research, and the Department of Anatomy. The whole fourth floor is allocated to Pharmacy, where the offices, classrooms, and laboratories are located. Enrollment is limited to 40 students in each class. The total enrollment for the 1955–56 session was 85. The greatly improved teaching facilities are consistent with the requirements of the A.C.P.E.

Dean W. A. Prout

Loyola University, College of Pharmacy, New Orleans, La.—Loyola College of Pharmacy was established in 1913 when the New Orleans College of Pharmacy, which had been incorporated in 1900, was affiliated with Loyola University in May of that year. A 4-year course was instituted in September 1933, and in September 1954, the College adopted a 2-year pre-pharmacy program. The College is planning a Botanical Garden in famous Audubon Park. In cooperation with the City of New Orleans it conducts an internationally known Pharmaceutical Museum in the Vieux Carré. The College's Student Branch of the A.Ph.A. has had 100% membership since 1938. The journal of the College has been published since 1935. A Rho Chi Chapter and Nu Chapter of Kappa Epsilon were installed in 1942. The College has had only two previous Deans. Enrollment was 73 for 1955–56.

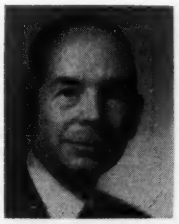


Dean J. F. McCloskey

Medical College of Virginia, School of Pharmacy, Richmond, Va.—The Medical College of Virginia was opened as a Department of Hampden-Sydney College in the fall of 1838, having been authorized on December 1, 1837. Although pharmacy has been taught since the very beginning as a part of the School of Medicine curriculum, during the session of 1878–79 the charter was amended to allow conferring the degree of Graduate in Pharmacy. The Medical College of Virginia has been state supported since 1860 and has the only School of Pharmacy in the state. Total enrollment is 280, including 7 graduate students. All the dispensing for the Outpatient Clinic and College Hospitals is under the Professor of Pharmacy. The College develops sound professional backgrounds, appreciation for professional ethics, and the concept of service.

Dean W. E. Weaver

Massachusetts College of Pharmacy, Boston, Mass.—The College was founded in Boston on December 26, 1823. Located in a great medical center, magnificently housed, most generously endowed, and with all its great resources devoted to pharmaceutical education, it is unique among the Colleges of Pharmacy of the U.S. Its Sheppard Library is one of the world's outstanding pharmaceutical libraries. Annual enrollment of the College includes about 475 undergraduate students and 25 graduate students. Some 2,500 alumni are located throughout the United States and abroad. In the immediate neighborhood are Harvard University Medical and Dental Schools, Simmons College, the Peter Bent Brigham Hospital, the New England Deaconess Hospital, the Y.M.C.A., the New England Conservatory of Music, Symphony Hall, Boston Public Library, and General Hospital.



Dean H. C. Newton

Montana State University, School of Pharmacy, Missoula, Mont.—The School was established in 1907 at Montana State College, Bozeman, and moved to the Montana State University campus, Missoula, in 1913. Enrollment has increased from 13 students in 1913 to nearly ten times that many in 1956. In 1915, three courses were set up leading respectively to the Ph.G. (two years), the Ph.C. (three years), and the B.S. (four years) degrees. The 5-year course was instituted in 1950. The first two years are devoted to pre-professional subjects and may be taken in any accredited college. The 3-year professional curriculum of the School of Pharmacy must be taken in residence at Montana State University. The M.S. degree is also offered. Over 400 B.S. and M.S. degrees have been conferred. Gamma Eta Chapter of Kappa Psi was chartered in 1920.

Dean R. L. Van Horne

New England College of Pharmacy, Boston, Mass.—The College had its inception in 1927 by its present Dean, Constantine N. Meriano. In 1948, it was authorized to grant the degree of Bachelor of Science in Pharmacy, adopted its present name, and purchased the buildings now occupied. These buildings formerly housed the School of Theology of Boston University and are situated near the top of historic Beacon Hill. The main building, after extensive remodeling, now contains classrooms, offices, library, and reception rooms on the lower floors, while the upper three floors are occupied by modern laboratories of the Pharmacy, Biological Sciences and Chemistry Departments. In 1956, the College received the right to award honorary degrees of Master of Science and Doctor of Science. The student body consists of 248 students, 5 of whom are international.

Dean C. N. Meriano

Ohio State University, College of Pharmacy, Columbus, Ohio.—A land grant college, founded in 1870 and opened in 1873, the Ohio State University today ranks among the top 10 universities in size in the nation. It occupies some 2,500 acres in the city of Columbus, capital of the state, with facilities including nearly 125 buildings, extensive farm land, two 18-hole golf courses, and an airport. Annual enrollment is in excess of 25,000. The College of Pharmacy, which dates as such on the campus from 1895, is one of five professional colleges in the University. The others are the Colleges of Medicine, Dentistry, Veterinary Medicine, and Law. The University also includes five undergraduate colleges, consisting of Arts and Sciences, Education, Commerce and Administration, Engineering, and Agriculture, with special Schools of Nursing, Journalism, Optometry, etc.

Dean L. M. Parks

North Dakota Agricultural College, School of Pharmacy, Fargo, N.Dak.—The North Dakota Agricultural College was founded in 1889 by provision of the state constitution, but it was actually organized October 15, 1890. The School of Pharmacy was initiated with a 2-year course in 1902. The present 4-year curriculum is designed to train young people for retail pharmacy practice, for positions in the narcotic service, for detailing of medicinal products to medical practitioners, for employment with wholesale and manufacturing pharmaceutical firms, and for positions connected with the inspection and analysis of foods and drugs. Graduate work is offered in pharmaceutical chemistry, pharmacy, pharmacognosy, and pharmacology. New courses have been introduced for students wishing to enter practice in hospital pharmacy, research, or teaching.

Dean C. E. Miller

Oregon State College, School of Pharmacy, Corvallis, Oreg.—Oregon State College is the oldest and largest state-supported institution of higher learning in Oregon. It had its origin as a small college founded in 1858 by the Methodist Church South. In 1868, the institution was designated as the Land Grant College of Oregon, and state support began. The curriculum of the School of Pharmacy of 5 years' duration is designed to give the student a sound, general education, as well as to train him for all positions in the profession of pharmacy. It aims to provide a background for both pharmaceutical competency and cultured responsible citizenship. The program leads to the B.S. or A.B. degree. The degrees of M.S., A.M., and Ph.D. are offered in the areas of pharmacy, pharmacology, pharmaceutical analysis, and pharmacognosy. Total enrollment is 7,200.

Dean G. E. Crossen

Ohio Northern University, College of Pharmacy, Ada, Ohio—The University was established in 1871 by Dr. Henry S. Lehr as a Normal School, and the College of Pharmacy originated in 1885 with the following announcement: "The increasing demand of students wishing to engage in the study of pharmacy has led the faculty to establish this as a distinct course. The pharmaceutical student will be enabled to perfect himself in theoretical pharmacy, theoretical and practical chemistry, botany, materia medica, and toxicology. Special attention will be devoted to all drugs and preparations appearing in the U.S.P." Former Deans were Charles Ashbrook, Bristol N. East, John McKinley, Brigham S. Young, David C. Mohler, and Rudolph Raabe (1917–1950). The College has had over 3,000 students graduate and has a known living alumni of 2,200.

Dean A. C. Smith

Philadelphia College of Pharmacy and Science, Philadelphia, Pa.—This College, the oldest teaching institution of its kind in America, was founded in historic Carpenters' Hall in 1821 as the College of Apothecaries to provide systematic instruction for apprentices in pharmacy. The name was changed to the Philadelphia College of Pharmacy when it was chartered in 1822. Early in the 20th century, the demand for education in the fields of chemistry, bacteriology, and biology became so great that the College instituted curricula in those sciences and in 1921 the name of the College was changed to the Philadelphia College of Pharmacy and Science. A few years later, the charter was amended once again to allow the granting of not only B.S. degrees but M.S. and D.S. degrees in pharmacy, chemistry, bacteriology, and biology. Annual enrollment approximates 750.

Dean Ivor Griffith

Dean G. L. Jenkins

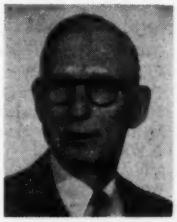
Purdue University, School of Pharmacy, Lafayette, Ind.—The School of Pharmacy was established in 1884 in response to a demand for a thoroughly practical and theoretical training in pharmacy and related subjects. More than 2,700 students have been graduated from the School and are pursuing the professions of pharmacy, medicine, teaching, and science. Among its graduates are numbered many of the prominent pharmacists and pharmaceutical scientists of the state and the nation. The M.S. and Ph.D. degrees are offered in the School with majors in industrial and hospital pharmacy, pharmaceutical chemistry, pharmacy administration, pharmacology, and pharmacognosy. Approximately 550 students attend the School, divided into 165 pre-pharmacy students, 325 undergraduates, and 60 graduate students in the very extensive graduate program.

Dean A. J. Bartilucci

St. John's University, College of Pharmacy, Brooklyn, N.Y.—The College welcomed its first students in September 1929. At that time, it occupied a portion of the building at 96 Schermerhorn Street, Brooklyn, N.Y. Since September 1951, the College has been located in a building at 72 Schermerhorn Street which it shares with the University Library and the Department of Nursing Education of the School of Education. On June 10, 1956, ground was broken for the new $4,500,000 Science-Pharmacy Building to be situated on the University's suburban campus in Jamaica, Long Island. It is expected that the new building will be completed and ready for occupancy in September 1958. The B.S. degree in Pharmacy is offered to successful candidates. The majority of St. John's graduates enter the retailing field. Many also pursue graduate study. Total alumni number about 2,000.

Dean W. H. Rivard

Rhode Island College of Pharmacy and Allied Sciences, Providence, R.I.—This College, founded in 1902, is located on the easterly side of Benefit Street in the City of Providence, R.I., and occupies two buildings. In September 1932, a 4-year course leading to the degree of B.S. in Pharmacy was inaugurated. The former curriculum was strengthened and new subjects added, both cultural and scientific, to amplify the needs of a 4-year course. In 1943, the College purchased adjacent property to house a new library and other departments. Total enrollment for the College year 1955–56 was 183 students. While primarily this College was founded to prepare students for the professional and scientific branches of retail pharmacy, pharmacy as a whole has changed and therefore today the graduate of this College receives a broad training in science.

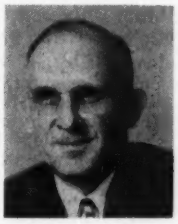


Dean A. F. Schlichting

St. Louis College of Pharmacy and Allied Sciences, St. Louis, Mo.—In 1860, the St. Louis Pharmaceutical Association appointed a committee to consider establishing a College of Pharmacy in St. Louis. Action was taken in 1864 when three St. Louis pharmacists held a meeting in the office of Dr. Montrose Palen and took steps to establish the St. Louis College of Pharmacy, a nonprofit organization. In January 1865, a faculty was appointed and lecture rooms engaged in the St. Louis Academy of Science. After outgrowing this and other locations, the College moved to its present location in 1927. The legal existence of the College dates from March 1887 when a charter was granted by the St. Louis County Court. This was revised in 1945. The training it offers is directed toward the highest type of professional service. B.S. and M.S. degrees are offered.

Dean R. A. Bowers

Rutgers University, College of Pharmacy, Newark, N.J.—The Newark Institute of Arts and Sciences began collegiate instruction in 1910 in cooperation with New York University and later became part of the University of Newark when that institution was formed in 1936. Two of its divisions became part of Rutgers University which after 1945 was known as the State University of N.J. Rutgers University College of Pharmacy was founded as New Jersey College of Pharmacy in 1892 by 6 men dedicated to the profession. Begun in 3 rented rooms in downtown Newark, the College by 1926 had acquired its own building in North Newark, and in 1927 was incorporated into Rutgers University. Professional training in the sciences (3 years) is preceded by 1 year in a liberal arts college. About 250 students attend. Women comprise 4% of the student body.



Dean F. J. LeBlanc

South Dakota State College, Division of Pharmacy, Brookings, S.Dak.—An act of the State Legislature, approved 1881, provided that an Agricultural College for the Territory of Dakota be established at Brookings. Total land grant for the College was 160,000 acres. The Board of Regents of the State of South Dakota authorized the teaching of a course in pharmacy at South Dakota State College in 1887. The first students were enrolled in 1889, and the first degrees were granted in 1891. Since that time, approximately 1,000 students have received their degrees in pharmacy. The Division of Pharmacy offers an opportunity to students to earn a B.S. degree in pharmacy or in pharmaceutical research. The M.S. degree is conferred. The enrollment for 1955–56 was 215 men and 30 women students, making a total enrollment of 245.

Dean M. A. Chambers

Southern College of Pharmacy, Atlanta, Ga.—The College had its beginning in 1903 as an independent college. At this time, a charter was granted to Dr. R. C. Hood, Dr. Edward Eberhart, and Dr. Hansell Crenshaw, all outstanding leaders in the fields of medicine and pharmacy. In 1938, the College was transferred from private ownership to a board of trustees. It is a nonprofit, nonsectarian, co-educational institution. In the first year, 1903–04, 6 students were graduated. Since that time, over 2,000 students have graduated from the college and are to be found in practically all the states and many foreign countries. The primary purpose of the College is to train men and women who will make themselves a real place in the community and be of service to humanity. No geographic distinction is made in accepting students. Applicants from foreign countries are accepted.

Dean J. B. Sprowls

Temple University, School of Pharmacy, Philadelphia, Pa.—The School was founded as a part of the School of Medicine in 1901. The first courses were offered at night. In 1907, it became a separate institution with a day school and a complete faculty of its own, under the direction of Dr. John R. Minehart, Dean. In 1932, Dr. H. Evert Kendig became Dean and served until his death in 1951. In 1946, the University acquired and completely renovated a spacious building on North Broad Street to provide housing for the Schools of Dentistry and Pharmacy. Approximately 425 undergraduate and graduate students are enrolled in the School each year. Members of the freshman class are selected primarily from Eastern Pa., Southern N.J., and Del. A number of foreign students are enrolled each year. These come from India, Korea, South America, etc.

Dean W. D. Strother

Southwestern State College, School of Pharmacy, Weatherford, Okla.—Southwestern State College was established in 1901 by the Territorial Legislature as the Southwestern Normal School. In 1920, 2 additional years of college work were added, and the first baccalaureate degrees were conferred in 1921. It has for its basic aim the establishment and maintenance of a well-rounded education for all students, including a basic foundation in the arts and sciences, many pre-professional areas, business education, teacher education, and commercial art. The School of Pharmacy at the College was organized in 1939, and the College was renamed Southwestern State College of Diversified Occupations. In 1941, it became the Southwestern Institute of Technology, and in 1949 again reverted to Southwestern State College. Enrollment for 1955–56 was 171.

Dean H. M. Jones, Jr.

Texas Southern University, School of Pharmacy, Houston, Tex.—The School was organized in 1948 with 6 students, one a young lady. It was a Department of Pharmacy in the Division of Natural Sciences and Mathematics within the College of Arts and Sciences. It was formally established as a school by a 1949 act of the Texas Legislature, when the first budget of $15,000 was appropriated. The staff consisted of the Dean and one teacher. At present there are 7 persons on the staff and a total enrollment of 156. In 1950, a quonset-type building, consisting of 3 laboratories and 2 storerooms, was occupied, and teaching was an inspirational type because of lack of facilities and equipment. The new ultramodern Pharmacy Building was dedicated October 12, 1952. Scholarships and awards are made available to needy students with high scholastic averages.

Dean L. C. Zopf

State University of Iowa, College of Pharmacy, Iowa City, Iowa.—The College was established in 1885 and has had three homes. The first was in the Medical College Building; the second was in a new building at the northeast corner of Iowa Avenue and Dubuque Street, where it moved in 1891; and it now occupies the North Wing of the Pharmacy-Botany-Chemistry Building plus an additional building which houses the manufacturing laboratory and drug service warehouse. Emil L. Boerner served as the first Dean of the College and was succeeded by Dean Wilbur J. Teeters, who relinquished his position to Dean R. A. Kuever in 1939, who served until July 1952. The College has a close connection with the University Hospitals and College of Medicine through its Departments of Drug Service and Hospital Pharmacy which was taken over in 1905.

Dean W. R. Brewer

University of Arizona, College of Pharmacy, Tucson, Ariz.—The School of Pharmacy was first organized at the University of Arizona in 1947 under the direction of Dr. Rufus A. Lyman as a department of the Liberal Arts College. In 1949, it was reorganized as a separate college and the first class was awarded the degree B.S. in Pharmacy on May 31, 1950. Graduate work leading to the M.S. degree was established in 1950 under Dr. Haakon Bang, who served as Dean from that year until 1952, when he was succeeded by Dr. Willis R. Brewer. The 5-year pharmaceutical and basic science curriculum, including required and optional humanistic courses, was instituted in 1951, with a class of 14 professional and 16 pre-professional students. The enrollment has steadily increased to the 1955–56 level of 97 professional and 66 pre-professional students, including 1 foreign.

Dean S. G. Mittelstaedt

University of Arkansas, School of Pharmacy, Little Rock, Ark.—A state legislative act provided for the establishment of the School at the beginning of the 1951–52 academic year in response to demands for well-trained individuals in practical and theoretical pharmacy, as well as interrelated subjects. The School located at the new University Medical Center, provides a basic education in the physical and biological sciences and the humanities, as well as highly specialized training in pharmacy. Its purpose is to train men and women of character, ability, and integrity to prepare, select, identify, manufacture, and dispense the medicinal substances used by the health professions. Two programs of study are offered: a 4-year curriculum (1 year pre-professional plus 3 years professional) and a 5-year curriculum (2 years pre-professional plus 3 years professional).

Dean D. H. Murray

University of Buffalo, School of Pharmacy, Buffalo, N.Y.—The University of Buffalo received its charter in 1846. Millard Fillmore, 13th President of the U.S., was its first Chancellor and served until his death in 1874. The University is privately endowed and controlled and is nonsectarian and co-educational in all its divisions. The School of Pharmacy, the second division of the University to be organized, has a history of 68 years of uninterrupted activity. It occupies Foster Hall, the cost and equipment of which was in excess of $800,000 and which is one of the 19 buildings on the 178-acre campus. The School offers the 4-year course leading to the degree of B.S. in pharmacy, also programs leading to the degree of M.S. in pharmacy or pharmaceutical chemistry, and the Ph.D. in pharmaceutical chemistry. Excellent library resources are available in the City of Buffalo.

Dean T. C. Daniels

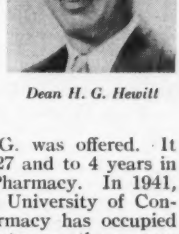
University of California, School of Pharmacy, San Francisco, Calif.—The School was organized July 10, 1872, under the name of the California College of Pharmacy. On June 2, 1873, the College became affiliated with the University of California and retained its affiliated status until July 1, 1934, when the College became an integral part of the University. In 1955, with the establishment of the 2-year pre-professional curriculum and 4 years of professional study, the name of the College was changed to School of Pharmacy. The School has facilities to accommodate 80 students per class, or a total of 320 students in the professional curriculum. In addition to this, it has facilities to accommodate a total of 40 graduate students. The enrollment for 1955–56 consisted of 246 undergraduate and graduate students, 9 of them foreign; 222 were male, 24 female.

Dean J. F. Kowalewski

University of Cincinnati, College of Pharmacy, Cincinnati, Ohio—On March 23, 1850, the General Assembly of the State of Ohio incorporated the Cincinnati Pharmaceutical Association and gave it the legal power for 30 years to operate a College of Pharmacy. With the outbreak of the Civil War, the College ceased to exist, but in 1871 resumed its instruction and has been in continuous existence since. However, for a decade after 1887, it was affiliated with the University of Cincinnati, and from 1902 on for several years it was affiliated with Ohio University. In 1898, C. T. P. Fennel assumed all its obligations and became its owner. It then existed as a privately owned institution until 1943 when it was again taken over by the Cin. Pharm. Assoc. On July 9, 1954, it became an integral part of the University of Cincinnati. Enrollment: 210 men and 18 women.

Dean C. H. Waldon

University of Colorado, College of Pharmacy, Boulder, Colo.—The College was established at the University of Colorado in 1911 as a branch of the School of Medicine. In 1913, it was organized as a separate College of the University. Incorporated by an act of the First Territorial Legislature of Colorado in 1861, the U. of Col. enrolled its first students in September 1877. The Chemistry-Pharmacy Annex was completed in 1950 and provides facilities for the College of Pharmacy. The College operates a model professional pharmacy. Prescriptions are compounded for the University Student Health Service by senior pharmacy students working under the careful supervision of instructors who are registered pharmacists. Student activities include A.Ph.A. Student Branch and the journal *Colloidal Suspensions*. Enrollment on July 5, 1956, was 254, including 11 graduate and 3 foreign students.



Dean H. G. Hewitt

University of Connecticut, School of Pharmacy, Storrs, Conn.—As a result of action taken by the Connecticut Pharmaceutical Association in 1920, a charter for an independent college of pharmacy was obtained from the state on June 3, 1921. On October 20, 1925, the Connecticut College of Pharmacy was opened at 150 York Street, New Haven, with a class of 86 students. A 2-year course leading to a Ph.G. was offered. It was extended to 3 years in 1927 and to 4 years in 1932, leading to the B.S. in Pharmacy. In 1941, the College was added to the University of Connecticut. The School of Pharmacy has occupied since 1953 a beautiful new structure on the campus of the University at Storrs, and has been selected as the Regional School of Pharmacy Training for the six land grant colleges in New England. Enrollment is 380 undergraduates and 23 graduate students.

Dean P. A. Foote

University of Florida, College of Pharmacy, Gainesville, Fla.—Through the efforts and financial support of the Florida State Pharmaceutical Association, a School (now a College) of Pharmacy was established at the University of Florida in 1923. Dr. P. A. Foote became Director in 1939 and Dean in 1949. A graduate program was begun in 1926 with work for the M.S. degree. The College became the first on the campus to offer the Ph.D. degree (1932). Majors are offered in pharmacy, pharmaceutical chemistry, pharmacology, and pharmacognosy. Other courses provide a foundation for work in the pharmaceutical, chemical, biological, and cosmetic industries. Present enrollment is 235 undergraduates, exclusive of freshmen, and 21 graduate students. During the past 5 years, students have come from many foreign countries.

Dean E. R. Serles

University of Illinois, College of Pharmacy, Chicago, Ill.—The College was organized as the Chicago College of Pharmacy on September 5, 1859, 8 years before the University itself was incorporated, and was the third of its kind in the U.S. Activities were suspended during the Civil War. It was reopened in 1870 but was destroyed by the Chicago fire of 1871. The pharmacists of the world, particularly those of Great Britain, came to the rescue and in 1872 it reopened with new equipment, including a library, much better than ever before. In 1896, it became the School of Pharmacy of the U. of Ill. and in 1932 its name was changed to the College of Pharmacy and the 4-year B.S. curriculum was announced. Teaching and research facilities were greatly expanded and a new $5,540,000 building was occupied in 1954. Enrollment is 504 for 1956–57.

Dean K. L. Waters

University of Georgia, School of Pharmacy, Athens, Ga.—The School was established in 1903. Dr. Samuel Benedict served as its first Dean. Dr. R. C. Wilson served as Dean from 1914 to 1948. Upon his retirement, Dr. Kenneth L. Waters, the present Dean, was appointed. At the time the School was organized, there were no educational requirements for the granting of licenses to practice pharmacy in Georgia. The only requirement was 3 years of practical experience and satisfactory passing of a State Board examination. It became the objective of the School to influence legislation whereby educational requirements would be raised. The School of Pharmacy presently occupies the "New College Building" built in 1822 which is probably the nation's oldest building housing a School of Pharmacy. Current enrollment in the School is 232 undergraduate students.

Dean J. A. Reese

University of Kansas, School of Pharmacy, Lawrence, Kans.—The first classes in pharmaceutical instruction at the University were held in the autumn of 1885 under the direction of Lucius E. Sayre. By an act of the State Legislature, the department became the School of Pharmacy, with Dean Sayre in charge. Professor L. D. Havenhill succeeded him, and Dr. J. Allen Reese has been Dean since 1940. The State Drug Laboratory was added to the teaching and research work of the School by the Legislature in 1907, and in 1913 the testing of drugs and medicines for the State Board of Health was taken over by the School. Since 1947, the Ph.D. degree, with a major in pharmaceutical chemistry, has been offered, and in 1950 two postdoctorate fellowships were established. The School of Pharmacy is located in a new completely modern 7-story building.

Dean N. M. Ferguson

University of Houston, College of Pharmacy, Houston, Tex.—The College was authorized by the Board of Regents to be opened in September 1947. The success of this young College of Pharmacy is partially due to the Houston Pharmacy Liaison Committee, which was instigated by Mr. L. E. Freeman and Dr. Allen C. Collette. This group worked very closely with the University administration in getting the College started. Dr. Collette represented the School as Acting Dean until September 1949, when Dr. N. M. Ferguson accepted the Deanship. Under Dr. Ferguson's administration, the College has become a Class A College which offers in addition to the B.S. degree in Pharmacy a limited M.S. degree program. Approximately 275 students have received their degrees from the College of Pharmacy. Current enrollment is about 250 students.

Dean L. L. Eisenbrandt

University of Kansas City, School of Pharmacy, Kansas City, Mo.—The Kansas City College of Pharmacy was established in 1885. The University of Kansas City, a private nonsectarian, co-educational, fully accredited institution, was founded in 1929 and opened in 1933. The KC College of Pharmacy became the University of Kansas City School of Pharmacy in 1943 and is scheduled to occupy a new 3-story building of modern design, offering the most up-to-date environment for scientific training. Classes are sufficiently small to allow the student close contact with the instructor. The curriculum includes training in the dispensing and manufacturing of pharmaceuticals; the chemistry of medicines; pharmacy administration; and pharmacology. The B.S. and M.S. degrees are offered. University enrollment is 3,000 students.

Dean E. P. Slone

University of Kentucky, College of Pharmacy, Louisville, Ky.—This College was founded as the Louisville College of Pharmacy by a group of men under the leadership of the late Dr. C. Lewis Diehl, August 16, 1870. It was incorporated by act of the Legislature February 6, 1873. It operated as a state institution without state support until July 1, 1947, when it became a unit of the University of Kentucky. A new building of the College of Pharmacy is being constructed on the campus of the University of Kentucky in Lexington almost across the street from the Agricultural Experiment Station. The modern 3-story building of reinforced concrete, aluminum, and brick will be equipped with modern laboratories, offices, and elevator. Total enrollment in 1955–56 at Louisville was 168, exclusive of freshmen.

Dean C. H. Rogers

University of Minnesota, College of Pharmacy, Minneapolis, Minn.—In 1891, provision was made by the Legislature for the establishment of a College of Pharmacy in the Department of Medicine of the University. In 1893, it became an autonomous unit and was designated a College. Classes opened in the fall of 1892. Frederick J. Wulling was appointed Dean and served until 1936. In 1911, the building now housing the College was gutted by fire. It was reconstructed for the College of Pharmacy and classes opened in 1913 in the building, which is now named Wulling Hall. Enrollment fast outgrew the laboratory facilities designed for a maximum of 150 students. The College will soon move to the building now occupied by the School of Mines, which will provide double the present floor space. Dean C. H. Rogers, appointed in 1936, will retire June 30, 1957.

Dean N. E. Foss

University of Maryland, School of Pharmacy, Baltimore, Md.—The University of Maryland was chartered in 1807 as the College of Medicine of Maryland. The School of Pharmacy, the oldest pharmacy school of the South, was organized on July 20, 1840, as the Maryland College of Pharmacy by a group of physicians and apothecaries to provide systematic instruction in pharmacy to replace the outdated apprenticeship training. In 1904, the College joined with a group of medical schools and the Maryland College of Dental Surgery to offer cooperative instruction in the health sciences, and thus formed the University of Maryland. In 1920, the Maryland State College also merged with these schools to form the present University. The School of Pharmacy now occupies a modern 6-story building. Degrees offered are the B.S., M.S., and Ph.D.

Dean E. L. Hammond

University of Mississippi, School of Pharmacy, University, Miss.—The University was chartered in 1844 and opened its doors for the first time in the fall of 1848. The School of Pharmacy began operation in 1908 and admitted 15 freshmen. Henry Miner Faser had much to do with its opening and as its first Dean served for 20 years until 1928. Its present Dean, Dr. Elmer L. Hammond, has also served 20 years. The School is housed in a building used jointly by Chemistry and Pharmacy completed in 1923. The top floor is devoted entirely to Pharmacy and cognate subjects. Since its opening in 1908, the School has graduated between 700 and 800 students. The present 4-year curriculum for the B.S. in Pharmacy dates back to 1932. By 1958, the School expects to announce a 5-year program to start in 1960. Current enrollment is about 140 (3 foreign students).

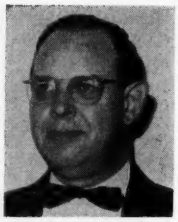
Dean T. D. Rowe

University of Michigan, College of Pharmacy, Ann Arbor, Mich.—Michigan was the first state university to offer a degree in Pharmacy (1868). It was the first pharmacy school in America to require courses in chemistry and related subjects and laboratory work in pharmacy subjects. From the beginning, the School has been productive in research and today with over 40 graduate students, has one of the largest pharmacy graduate programs in the U.S. The approximately 200 undergraduate students have their choice of three curriculums: retail pharmacy, hospital pharmacy, and preparation for graduate study and research. About 6% of combined graduate and undergraduate enrollment is composed of foreign students. Michigan has the highest percentage of women enrolled of any school in the continental U.S. (20% of the undergraduates).

Dean J. B. Burt

University of Nebraska, College of Pharmacy, Omaha, Nebr.—Instruction in pharmacy began in 1908 at the University of Nebraska with the establishment of the School of Pharmacy as part of the College of Medicine. In 1915, the State Legislature created the College of Pharmacy as an independent college of the University. Dr. Rufus A. Lyman served as Dean from 1915 until his retirement in 1946. His successor is Dean Joseph B. Burt. Beginning in September 1957, the College will require 2 years of pre-pharmacy work in liberal arts before entrance, making pharmacy a 5-year program. The College had instituted a 4-year program in 1926. The objective of the College is to prepare its graduates to assume with dignity and honor the intellectual, legal, civic, and moral responsibilities of the profession. Enrollment: over 100 undergraduates and 10 graduates.

University of New Mexico, College of Pharmacy, Albuquerque, N.Mex.—The University, situated in a metropolitan area of 190,000 inhabitants, a mile above sea level, on a plateau overlooking the Rio Grande, was created by a legislative act in 1889 and opened as a summer Normal School on June 15, 1892. Its expansion from 20 acres and one structure to 400 acres and 49 buildings during 67 years indicates its extraordinary development. The College of Pharmacy was established at the University in 1945, with Dr. Roy A. Bowers as Dean. In 1948, the College moved into its newly constructed building. Dr. Elmon L. Cataline was appointed Dean in 1951, and the present faculty numbers 5. The College provides training requisite to success in the practice of pharmacy and a consultant service to the profession in the state. Enrollment is about 100.



Dean E. L. Cataline

University of Pittsburgh, School of Pharmacy, Pittsburgh, Pa.—The College was founded in 1878 and chartered under the laws of Pennsylvania. In 1896, the Pittsburgh College of Pharmacy became the School of Pharmacy of the Western University of Pennsylvania and in 1908 of the University of Pittsburgh. In 1908, the Scio College of Pharmacy merged with the School. On January 26, 1948, its merger with the University was complete and the School became legally the School of Pharmacy of the University of Pittsburgh. From an abridged and intensive 2-year (Ph.G.) course, requirements were consistently increased until a 4-year course leading to the B.Sc. degree in Pharmacy was adopted in 1930. Since the beginning of the graduate program in 1951, 20 M.S. degrees and 3 Ph.D. degrees have been granted. In 1955–56, total enrollment was 321.

Dean E. C. Reif

University of North Carolina, School of Pharmacy, Chapel Hill, N.C.—The School was established in March 1897 in response to urgent requests made by the pharmacists of the state. Edward Vernon Howell was appointed Professor of Pharmacy and Dean. The School enjoyed immediate success and has maintained a continuous full-scale program for pharmaceutical education. The first course of studies extended over two sessions of 9 months each and led to the degree of Graduate in Pharmacy (Ph.G.). The School advanced its minimum degree offerings from 2 to 3 and in 1932 to 4 years of study. The academic degree of Bachelor of Science in pharmacy is the only undergraduate degree offered. Graduate curricula for majors in pharmacy and pharmaceutical chemistry have been offered for the degrees of M.S. since 1933 and Ph.D. since 1947.

Dean E. A. Brecht

University of Puerto Rico, College of Pharmacy, Rio Piedras, P.R.—A Department of Pharmacy was created at the University of Puerto Rico on September 22, 1913. Its first Director was Dr. Luis A. Salivia. In 1925, the Department was organized as a College, with Lucas Luis Vélez as Dean. He held this office until his death in 1940. At first, a 2-year program leading to the degree of Pharmaceutical Chemist and a 4-year program leading to the B.S. degree were offered. Enrollment for the first year was 19 students, 12 of whom finished the 2-year program. In 1916, the Ph.C. program was increased to 3 years. In 1919, a 2-year course for the Graduate Pharmacist degree was also established, and in 1928, the 4-year curriculum leading to the B.S. degree was adopted, which in 1949 was extended to 5 years. Current enrollment consists of 178 students (88 women and 90 men).

Dean L. Torres-Diaz

University of Oklahoma, College of Pharmacy, Norman, Okla.—In 1892, the University of Oklahoma offered its first classes and in 1892 Dr. Edwin DeBarr, head of the Chemistry Department and Secretary of the Oklahoma Pharmaceutical Association, succeeded in establishing a Department of Pharmacy within the University. The first two graduating classes of the University were made up entirely of pharmacy students. In 1904, the School moved into a new Science Hall after a disastrous fire in 1903 and Homer C. Washburn became its head. In 1912, Charles H. Stocking became the second Dean. In 1917 he was succeeded by Howard Brown. In 1919, David B. R. Johnson became Dean. Dr. Ralph W. Clark was named Dean in 1949, and the School was changed to College. Total enrollment is 162, including 139 men and 23 women; 2 are foreign.

Dean R. W. Clark

University of South Carolina, School of Pharmacy, Columbia, S.C.—Instruction in pharmacy at the University was first provided for in an act passed in 1865 by the South Carolina General Assembly. This School continued until 1877. In 1888, pharmaceutical instruction was again resumed and continued for a period of 3 years. In 1924, the present School of Pharmacy was organized and has been in continuous operation. The chief aim of the School is to give a thorough scientific foundation for pursuing the profession of Pharmacy. The curriculum is designed to give both cultural and professional training. The purpose of the School is to keep students informed of developments in the profession and to emphasize the importance of affiliation in local, state, and national organizations in order to become leaders in their community. Total enrollment is 184, including 15 women.

Dean R. W. Morrison (Acting)

University of Southern California, School of Pharmacy, Los Angeles, Calif.—The School of Pharmacy at the University of Southern California celebrated its 50th anniversary in 1955. Its aim is to provide a means for pharmaceutical education and to supply a broad foundation for the student's professional career by offering systematic instruction and special training in those subjects requisite for the successful practice of pharmacy. It has graduated more than 2,000 men and women and they comprise at least half of all the pharmacists in the Southern California area, as well as graduates working in clinical, manufacturing, chemical, and other laboratories. It was the first pharmacy school in the nation to offer the Doctor of Pharmacy degree in a 6-year course of study. The Ph.D. in Pharmacy was added in 1953. Enrollment is 288 students; 4 are foreign.

Dean A. G. Hall

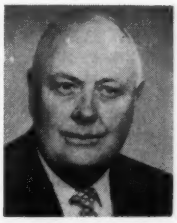
University of Toledo, College of Pharmacy, Toledo, Ohio—The University of Toledo was founded in 1872 as the Toledo University of Arts and Trades. It is now composed of the Colleges of Arts and Sciences, Pharmacy, Education, Business Administration, Engineering, and Law. The College of Pharmacy is housed in University Hall, a large and beautiful limestone building erected in 1931, in which 5 well-equipped laboratories are assigned for the study of pharmacy. In addition, there are offices, a research laboratory, and a dispensing laboratory. In the dispensary, each student has an individual desk fully equipped with apparatus and materials. On January 10, 1938, the Division of Pharmacy was separated from the College of Arts and Sciences and established as the College of Pharmacy. Total enrollment for 1955–56 was 113, 100 men, 13 women; 2 were foreign.

Dean C. H. Larwood

University of Tennessee, School of Pharmacy, Memphis, Tenn.—The School was organized in 1898 at Knoxville as a part of the Chemistry Department of the University of Tennessee. In 1909 it was moved to Nashville where it operated under the Medical Department. In 1911 and 1912 the School was moved to Memphis and was operated as a separate school. The School is fully accredited and recognized. After September 1958, candidates for admission to the 3-year pharmacy curriculum must have completed 2 years of prepharmacy work. The laboratories are designed and equipped for work in pharmacy, chemistry, pharmacology, pharmacognosy, physiology, and bacteriology. A model pharmacy is completely equipped with over 8,000 items composed of prescription products and sick room surgical supplies. Total enrollment in 1955–56 was 195 students.

Dean K. J. Goldner

University of Utah, College of Pharmacy, Salt Lake City, Utah—The practicing pharmacists of the State of Utah, through the President and the Board of Regents of the University, brought about the establishment of this College of Pharmacy. In 1946, quarters were found; a faculty headed by Dean L. David Hiner was assembled; and a curriculum in pharmacy was set up at the University of Utah. The curriculum was designed to enable the student to specialize in pharmacy, pharmaceutical chemistry, pharmacology, pharmacognosy, or pharmacy administration, according to the aptitudes and tastes of the student. The challenges of a life of personal service, with financial opportunities, are stressed. In its comparatively brief lifetime, the College has grown to a current enrollment of 165, representing several states; also Hawaii, Germany, and Japan.



Dean L. D. Hiner

University of Texas, College of Pharmacy, Austin, Tex.—In 1893, the 23rd Texas Legislature added $2,500 to the budget of the Medical Branch of the University of Texas for the purpose of establishing a School of Pharmacy at Galveston, with Dr. James Kennedy, a practicing physician from San Antonio, the first professor of pharmacy. During the first year, 11 students attended the two sessions of 7 months each. The course has been extended through the years. The School was moved from Galveston to the main campus in 1927 and the name changed to College of Pharmacy. In 1948–49, graduate work leading to the M.S. degree in Pharmacy was offered. The Ph.D. degree, with majors in pharmacy, pharmaceutical chemistry, pharmacognosy, and pharmacology is also offered. The College of Pharmacy has graduated approximately 2,500 students.

Dean H. M. Burlage

University of Washington, College of Pharmacy, Seattle, Wash.—Instruction in pharmacy at the University of Washington was first offered in 1894. A 4-year curriculum was established in 1904, and graduate work was begun in 1912. Since 1925, the College of Pharmacy has accepted candidates for the Ph.D. degree, with specialization in pharmacy, pharmaceutical chemistry, and pharmacognosy. The College is a member of the University Division of Health Sciences which coordinates teaching and research in medicine, dentistry, nursing, and pharmacy. Special facilities include a drug plant garden, which comprises $4\frac{1}{2}$ acres of garden area, greenhouses, and research laboratories. A Drug Service Department manufactures pharmaceutical preparations for the Schools of Dentistry and Medicine. Enrollment totals approximately 250, 15 being foreign.

Dean J. E. Orr

University of Wisconsin, School of Pharmacy, Madison, Wis.—The School was established as a Department in 1883 under the directorship of Dr. Frederick B. Power. Dr. Edward Kremers succeeded Dr. Power in 1892 and under his direction the Department of Pharmacy became the first school to offer a 4-year curriculum in pharmacy leading to the B.S. degree. It also became the first school to award M.S. and Ph.D. degrees in Pharmacy, based upon graduate study and research. In July 1950, the Department was elevated to the status of a School, and Dr. Arthur H. Uhl, Director of the Department since 1935, was named the first Dean. At present, about 250 undergraduate students include sophomores, juniors, and seniors on the Madison campus and sophomores at the University of Wisconsin-Milwaukee Department of Pharmacy; also 60 graduate students.

Dean A. H. Uhl

University of Wyoming, College of Pharmacy, Laramie, Wyo.—This year marks the 10th anniversary of the founding of the University of Wyoming College of Pharmacy, which is housed in Merica Pharmacy Building on the beautiful University of Wyoming campus in Laramie, an attractive western city of 18,500 population. The considerably more than mile-high altitude of the Wyoming campus assures a delightful climate with abundant sunshine and invigorating atmosphere. The professional courses, which include those directed toward retail pharmacy, hospital pharmacy, the wholesale drug field, pharmaceutical industry, pharmaceutical chemistry, government employment at the Federal, state and municipal levels, and other positions in the health fields, are coordinated with the scientific and cultural courses offered elsewhere in the University.

Dean D. W. O'Day

Washington State College, School of Pharmacy, Pullman, Wash.—The first annual College catalogue published in 1892 lists a course in pharmacy. In the intervening years, WSC has established a full-fledged School of Pharmacy offering the 4-year B.S. degree, the 5-year optional B.S., the M.S., and the Ph.D. Starting in 1957, the 5-year B.S. will be offered exclusively. George B. Hitchcock, former Professor of History, was in charge of the first pharmacy course of 1892. George H. Watt became the first Professor of Pharmacy in 1898, and was followed by Professor A. F. Maxwell in 1913, who was succeeded by Dr. P. H. Dirstine in 1917, who became Dean of the School of Pharmacy when it was changed from Department status in 1918. When Dr. Dirstine retired in 1952, Dr. Haakon Bang succeeded him. Enrollment (1955–56): 193 undergraduate, 4 graduate, and 3 international students.

Dean Haakon Bang

Wayne State University, College of Pharmacy, Detroit, Mich.—This University is the capstone in the educational structure of the City of Detroit, whose school system, under the Board of Education, offers educational facilities from the pre-school level to the Doctorate degree, all under one governing body. It was organized in 1933 as the College of the City of Detroit. Its name was changed to Wayne University in 1934. The College of Pharmacy was established by the Detroit Board of Education in 1923 upon recommendation of the Detroit Retail Druggists Association. In 1924, it was moved to the College of the City of Detroit, and in 1928 was established as a separate unit of WU. The need for room for continued expansion led to two more moves: in 1935 to Mullet Street and in 1952 to its present location on the main campus. Enrollment for 1955–56 was 185.

Dean Stephen Wilson

West Virginia University College of Pharmacy, Morgantown, W.Va.—The University was established February 7, 1867, and first offered a 4-year course in Pharmacy leading toward a Bachelor of Science degree in 1899, but there is no record of any students enrolling in the course. The WVU College of Pharmacy was established as a Department of the 2-year School of Medicine in 1914. It has for its primary purpose the preparation of pharmacists to supply the needs of retail pharmacy in W.Va. Because of limitations in facilities, the College may accept only a limited number of nonresident students. It does not offer graduate work. WVU is now in the process of building a $30,000,000 Medical Center. The Basic Science Building is nearly completed. Pharmacy will occupy part of the Medical Center, along with Medicine, Dentistry, and Nursing.

Dean J. L. Hayman

Xavier University, College of Pharmacy, New Orleans, La.—Xavier University of Louisiana, opened in 1915, has witnessed a growth and development unparalleled in the history of schools for Negro youth. It undertakes the education of the colored Catholic youth of New Orleans. The College of Pharmacy was established at the University in 1927. In 1932, the University moved to its present location at 7325 Palmetto Street, and the College is located in the Science Hall of the New College Building. The purpose of the College is to provide instruction by a thoroughly experienced faculty for students who desire the special and complete training necessary for the successful practice of pharmacy and allied fields. The 1955–56 enrollment was 106, including 89 men, 17 women, and 2 foreign students.

Dean L. F. Ferring

A Look at Pharmacy Orientation Courses*

by Charles O. Lee†

ORIENTATION, according to Webster's unabridged dictionary, is "figuratively, adjustment to an ideal or a principle; determination or sense of one's position with relation to environment or to some particular person, thing, field of knowledge, etc."

Just how does one become oriented to a field of knowledge such as a profession? It is a lifetime process and not something to be obtained from a course or two with the word "orientation" as a part of the course title.

Early Orientation Courses

In his inaugural address in 1909 the late President A. Lawrence Lowell of Harvard proposed an orientation program for beginning college students. In the autumn of 1911 Reed College offered the first orientation course for which students received college credit. At the beginning of the second semester of that school year (1911–12) the University of Washington offered a credit orientation course. Pioneer courses in orientation were offered by Amherst in 1914–15 and by Brown University in 1915–16. During the years 1915–17 seven other orientation credit courses were begun, four in eastern and three in western colleges. By about 1930 one-fourth to one-third of the standard American colleges and universities were offering orientation courses.[1]

Any adjustment that one might get from a college orientation-week program or even from a formal course in the subject would be, to say the least, very incomplete with respect to any field of knowledge, especially a profession. One has to have some kind of experience with an ideal or a principle, an environment, a person, or a field of knowledge, in order to become oriented. A week or a semester, or even a year's program of orientation might serve as a beginning on the way to becoming adjusted to a field of knowledge but it would take a long time to complete the process. Persons are known to us all, both young and old, who seem ill adjusted to anything. Perhaps an early orientation course would have given them the direction they needed. But that is doubtful.

Course titles are often changed to conform to faddish ideas without changing the course content to conform to the fad. That is mistaking change for progress. And this happens often. Examination of the catalogue descriptions of 38 of the orientation courses proves they are more confusing than clarifying. The descriptions tell the reader very little. In some cases a great variety of subjects are named but this gives no clear conception of the methods of presentation, points of emphasis, or sequence of subjects, all of which are most important. This may be said, of course, about subjects other than orientation.

Current Orientation Courses in Pharmacy

Early in the year cards were addressed to over 76 colleges of pharmacy asking for recent catalogues of courses. Seventy of the schools responded. Data concerning the orientation courses are shown in Table I. About 46% of the schools studied do not offer an orientation course, but it is not unlikely that some of the schools present the usual orientation subject matter in other courses.

TABLE I—PHARMACY ORIENTATION OCURSES

Offering	No. of Schools
No courses in orientation	32
Courses with "orientation" in the title	31
Courses with "orientation" in the description but not in the title	5
A survey course similar to orientation	1
Both a general and a pharmacy orientation course	1
Total	70

(*Continued on page 682*)

* Presented to the Section on Education and Legislation, A.PH.A. Detroit Convention, April 1956.

† Professor of Pharmacy, Ohio Northern University, Ada, Ohio.

[1] *School and Society*, 31, 336(Mar. 8, 1930).

Fact & Fantasy

By W. PAUL BRIGGS†

The words "business" and "profit" are as wholesome and polite as "home" and "mother." But a few years ago, when so-called economic Royalists were the target of politicians, "profit" almost became a profanity.

Alexandre Dumas just 100 years ago oversimplified a basic question of fact when he said: "What is business? It is quite simple. It is other peoples' money."

Profit Motive Is Honorable

To be sure, a full and constructive life cannot be built on profit as an end in itself. But legitimate gain is an honorable and necessary reward for useful products or helpful services. There is no moral or pharmaceutical incompatibility between profit and professional practice. But for many years pharmacy shunned and suppressed the idea that we should teach our students how to survive in the blistering battle of Main Street. Happily, pharmaceutical educators have now discarded this fantasy and are coming to grips with the grim facts of modern competitive life.

Profit is the incentive devised to achieve man's maximum productivity. Profit does not necessarily mean money. It frequently means more in personal prestige, fulfillment of spiritual goals, benefits bestowed on fellow men, than merely private gain in dollars. Oftentimes one's profit comes from a combination of these rewards. Yet somehow even the most dedicated clergyman, pharmacist, physician, statesman, or teacher must aquire material gain to care for his family.

The church, the hospital, and the government must derive revenue from their services else these hallmarks of civilization would fall for lack of nourishment. The lawyer, the physician, the professor, and the pharmacist must also receive a profit from their professional services. In fact, the public expects profit taking from those who serve them, just as they expect to make a profit from their own work.

Pharmacy Administration Courses Weak

The American Foundation for Pharmaceutical Education is glad of an opportunity to support the annual Seminar for College of Pharmacy Teachers, and is especially interested in the Seminar on Pharmacy Administration. The A.C.P.E.[1] and the A.A.C.P.[2] Committee on Curriculum have indicated that this area is a distressingly weak spot in our educational program. It is hoped that the collective efforts to strengthen teaching in pharmacy administration soon will be fully effective.

In 1951, Dr. Richard A. Deno, former Director of Education Relations of the Council, said that only 7 out of 71 colleges had full-time, professionally qualified teachers of pharmacy administration. Three or four other colleges, he said, had the part-time services of professionals; about 20 colleges were utilizing teachers from schools of business or commerce, but that ". . . over half of the colleges do not have even reasonably adequate solutions worked out to the problem of instruction in this area."

AFPE Contributions

In view of this situation, the American Foundation for Pharmaceutical Education promptly included business administration among the fields open to graduate study by its Fellows and awarded two such Fellowships in 1952. In February 1952 the Foundation announced establishment of a new program of Teaching Fellowships in Business Administration in an effort to increase quickly the number and quality of teachers of pharmacy administration in our colleges.

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* Presented at the American Association of Colleges of Pharmacy Teachers' Seminar on Pharmacy Administration, Austin, Tex., July 1956.

† Executive Director, American Foundation for Pharmaceutical Education.

[1] American Council on Pharmaceutical Education.

[2] American Association of Colleges of Pharmacy.

Since then the Foundation has awarded 13 Teaching Fellowships and 12 regular Graduate Fellowships in Business Administration. Four A.F.P.E. Fellows in Business Administration are serving on the staff at this Seminar. Most of the Fellowships have been or will be renewed for two or more years. This direct "investment," through the farsighted generosity of the drug trade and industry, for graduate training in this field alone amounts to over $73,000 for the last 4 years. The 25 individual grants for graduate training in business administration have been made to advanced students at the Universities of Alabama, Buffalo, Colorado, Denver, Georgia, Michigan, Pittsburgh, Wisconsin, Texas, George Washington, New York, Ohio State, Purdue, Washington, North Dakota Agricultural College, and the State College of Washington.

Some of these Fellows have graduated, and when all have completed their training we can anticipate an impressive improvement over the 1951 situation that revealed only 7 full-time professionally qualified teachers of pharmacy administration. And there probably are other students now qualifying in this field who are not A.F.P.E. Fellows.

The A.F.P.E. will continue its Graduate (regular) and Teaching Fellowships in Business Administration because, while a good start has been made, it can see no likely saturation level for men trained in pharmacy and in business. In fact, there is abundant evidence that even our best efforts will not come close to closing the gap between supply and demand in this specialty.

Future Objectives

The primary target of the A.F.P.E. in this field is a fully qualified teacher of pharmacy administration for every college of pharmacy. It would appear that if every pharmacy graduate now studying business administration qualifies in the next two years and accepts a teaching post in one of our pharmacy colleges, there will then be only about half as many full-time, professionally qualified teachers of pharmacy administration as there are schools of pharmacy. And this bit of fantasy ignores the insistent and increasing demand of the wholesale drug trade and manufacturing industry for men with this specialized combined training.

It may take 5 years of crash programing to produce even the minimum required number of professionally qualified teachers of pharmacy administration. But the effort will pay high dividends to all of pharmacy. Now let us face the facts—some of these men will find places in the drug trade and industry. Thus our efforts must be continued, indeed increased, even to approach the total demand for business-trained pharmacists for teaching, wholesaling and manufacturing. The Foundation intends to give every possible assistance to the colleges as they strive to fill this disturbing personnel deficiency.

Certainly all of pharmacy will benefit with achievement of the recommended program for a separate Department of Pharmacy Administration in every college; headed by a full-time graduate-trained, professionally qualified teacher; offering a program of 18 credits for 288 clock hours of instruction in economics, pharmacy accounting, drug marketing, pharmacy management, pharmaceutical law, and business law.

A penetrating yet practical approach to sound instruction in this field has been recommended by the consultative committee of experts consisting of Drs. B. Olive Cole, Joseph H. Goodness, Frank C. Maynard, Herman C. Nolen, Paul C. Olsen and Stephen Wilson. This program for instruction in pharmacy administration is most impressive but little understood outside the teaching fraternity. The A.F.P.E. will undertake to bring this encouraging picture to the attention of its friends in the business and industry of pharmacy. Our plans, our progress and our productivity toward making pharmacy profitable as well as professional will all be welcome.

Challenging Observations

Two challenging observations may be of special interest and within the scope of our responsibility to pharmacy in the years ahead.

1. *A clear-thinking, pharmacy-conscious, but aggressive merchandising friend recently expressed the view that perhaps pharmacists are not educationally and psychologically conditioned to manage the large retail operations of a modern pharmacy. Possibly, he said, pharmacies in the future—with increasing personnel, management, accounting and merchandising problems—must be managed by men specially trained for such executive duties rather than by pharmacists! Here is a challenge that pharmaceutical education must answer.*

2. *The J. Walter Thompson Co. has recently reported that pharmacy sales have not kept up with disposable income. That, just to be in line with the total income of the people, retail sales should be increased by at least 15%. And to reach their prewar share of the discretionary spending power, present pharmacy sales should be doubled. Here is an urgent and down-to-earth problem that seems to fall squarely in the line of fire of teachers of pharmacy administration.*

There are but two kinds of people in the world, the good and the bad, and the self-appointed good decide which is which. Let us drop the fantasy that success and prosperity are inherently evil. Let us recognize good pharmacy management and administration for what it really is—an inseparable part of good professionalism.

It is high time for the leaders in pharmacy administration to establish themselves as judges of good and bad, rather than as the judged. It is absurd to consider as "bad" pharmacists all those operating modern, profitable pharmacies, and as "good" pharmacists only those electing to pose as martyrs for adherence to obsolete and uneconomic practices.

The Student Branches of the American Pharmaceutical Association

by John F. McCloskey*

The Student Branches of the AMERICAN PHARMACEUTICAL ASSOCIATION in the Colleges of Pharmacy in America have achieved great success. They have fulfilled the predictions and hopes of pharmacy leaders of years gone by. Today there are 74 Branches in the 75 accredited Colleges of Pharmacy with a membership of 13,100,[1] a truly remarkable achievement in a short space of 25 years. Success with Student Branches has not been an easy task. The early and constant labors of men like E. F. Kelly,[2] Prof. E. V. Kyser, Dr. C. R. Jordan, Dr. J. H. Beal, B. V. Christensen,[3] and many others prominent in the national organization as well as the Deans and faculty members of the Colleges and the student leaders have encouraged the formation of Branches. They realized how tremendously valuable Branches could be, first to pharmacy as a profession and secondly as a source of trained and valuable members for the A.PH.A.

Not all of the leaders in pharmacy or the officers of the national organization were enthusiastic about creating a new type of membership in the A.PH.A. There are many instances where the efforts of students to take part in our national affairs in pharmacy were ignored. There was at times opposition to the establishment of Branches when partial refunds of dues paid were contemplated. But this is not unusual; as with every great forward movement there are always roadblocks, sometimes direct opposition, but if the project is truly a great one, no obstacles can prevent its progress. So it is with our Student Branches of today. They have demonstrated their fitness to be a functioning part of the A.PH.A.; they have proved their earnestness to be part of the A.PH.A.; they have shown leadership, initiative and perseverance that proves that they are worthy of all the privileges bestowed upon them by the AMERICAN PHARMACEUTICAL ASSOCIATION and the respective university councils which have permitted their establishment in the Colleges.

Histories of Student Branches

Sometimes the history of great events is lost because it was not recorded, but this is not true concerning our Student Branches. Written records are nearly complete and some of the unrecorded history is available, but to the printed word all pay allegiance. Study is now underway at many Colleges of Pharmacy to compile complete histories of the Student Branches. It is hoped that similar studies will begin at *all* of the Branches so the history of a great forward step in pharmacy can be accurate and readily available. Vol. XIX, No. 5, May 1930, page 545, of the *Journal of the A.Ph.A.* reads:

"At a joint meeting of the Committee of the A.A.C.P. and the Council of the A.PH.A. held in Baltimore, May 5, 1930, the plan for the establishment of Student Branches of the A.PH.A. . . . was agreed upon and endorsed.

"1. The organization of Student Branches . . . is considered both feasible and advisable.

"2. The Branches should be organized on the basis of the following provisions:

"a. A student membership with full membership in the local Student Branch and associate membership in the A.PH.A. Student members automatically to become full members . . . upon graduation.

"b. Dues to be $5.00, $3.00 of which is to be retained by the A.PH.A. for expenses of furnishing

* Dean, Loyola University, College of Pharmacy, New Orleans, La.

[1] As of Dec. 1, 1955.

[2] Secretary, A.PH.A., 1925 until his death in Oct. 1944.

[3] Deceased Sept. 12, 1956. Retired Dean, Ohio State University College of Pharmacy.

"With graduation exercises completed . . . we now have very close to two thousand 1956 graduates who have taken advantage of the three-year program of active membership extended to all senior pharmacy students who were members of a Student Branch of the A.Ph.A. . . ."

Robert P. Fischelis,
***This Journal*, August 1956**

publication furnished to members—$2.00 to be remitted to the Student Branch.

"Your Committee recommends that the A.A.C.P. endorse the plan."

Vol. XIX, No. 10, October 1930, pages 1150 and 1151 records the changes in the By-Laws of the A.PH.A. which is the acceptance of Student Branches. (See page 665 for By-Laws of the A.PH.A. Student Section.)

Why Were the Student Branches Established?

Student Branches were established in cooperation with the A.A.C.P. to provide a professional organization in each teaching institution, and particularly to acquaint students of pharmacy with the state and national organizations and their work; also, to impress upon them the necessity of prompt affiliation with these organizations when they enter practice.

Where and When Were the First Branches Established?

No thorough study has been made of this question by the writer but the records reveal that in A.PH.A. Council letter No. 6, December 23, 1931, Item 61, the application of the University of Florida Student Branch to establish a Branch was presented and Council letter No. 7 of January 14, 1932, granted this approval. On this same date the University of Wisconsin petioned the Council to approve the formation of a Branch. It is interesting to record that Dr. Edward J. Ireland, now on the staff at Loyola University, was elected President of the Student Branch at Wisconsin on this date. In Vol. XXI, No. 4, April 1932, page 407, it is recorded that the Student Branch at the University of Pittsburgh elected its officers. On the same date the South Dakota State College Student Branch held a meeting and elected officers. In October 1932 the Student Branch of Western Reserve University held its first meeting of the school year. The author makes no decision as to the first Student Branch but hopes to be able to give this answer at a later date.

Up to about 1935 there was little activity in developing Student Branches but about this time the problem of membership in the A.PH.A. became critical. Dean Ziefle of Oregon and Dean Ernest Little of Rutgers along with Dr. E. F. Kelly, Secretary of the A.PH.A., began to stimulate the Colleges to establish Branches. Dr. Kelly wrote on October 6, 1937:

"With pre-requisite legislation in forty-five states . . . it is apparent that the future of pharmacy rests more than ever in the hands of students and graduates of our colleges of pharmacy. Our sole purpose is to provide a professional organization for them. The Student Branches represent the best means of bringing into the A.PH.A. the membership of the type of pharmacist that we need."

However, few new Branches were established. The Branch at Loyola University was in the process of formation during 1934 but it was not until May 5, 1938, that the Branch was formally installed. Since 1942 there has been a remarkable spurt in establishing Branches, and the author hopes in a later paper to be able to give correct dates in chronological order of the establishment of all A.PH.A. Student Branches.

What Have the Branches Accomplished?

To answer this would take many pages but a few facts may indicate the future trends. Loyola Branch urged the Sixth District of Boards and Colleges in 1943 to encourage the Student Branches to meet at the same time and place. The first attempted national meeting of Student Branches was developed by Leo Babin from Loyola and a meeting was held at the Atlanta A.PH.A. meeting in 1939. About six Branches were represented. Ohio State University students organized a joint meeting in the Fourth District several years ago. The establishment of a Student Section in the A.PH.A. and the programs they have conducted the past few years should be ample answers as to what the Branches can and will accomplish.

The Student Branches have stirred the pharmacists in every area where they serve. They have been instrumental in the creation of many Local Branches of the A.PH.A. They have accomplished things that no others could have done. They have stimulated Pharmacy Week as never before. They have given all pharmacists hope for the future and all are proud of them.

It is hoped that the histories of the Student Branches referred to above will pay proper tribute to the many faculty moderators under whose guidance the Branches have developed. Also, tribute must be given to the younger leaders of our A.PH.A. who have conducted the meetings of moderators and representatives of the Branches at each national meeting.

To the students, congratulations for doing a splendid job! They are grand people!

The A.PH.A's Student Section*

by Roy A. Bowers†

THE most important single activity of any national society is its annual convention. In fact, these annual meetings determine the policies upon which societies carry on their activities. Executive committees and executive staffs function for the membership between conventions. Without annual meetings, organizations would cease to be of maximum usefulness to their membership because the individual members would be deprived of a direct voice in the management of society affairs.

Complex organizations such as the AMERICAN PHARMACEUTICAL ASSOCIATION are divided into individual groupings according to membership interest within the objectives and purposes of the organization as a whole. In this manner each individual member is provided the means by which he may participate in the ASSOCIATION on the national level. The Student Section is the place where pharmacy students as Associate Members come together once a year to meet with delegates and representatives from each of the Student Branches to further collectively the desires and aspirations of those entering the profession.

The Student Section is unique as compared with other A.PH.A. Sections in that it represents a highly organized, nation-wide network of student organizations in all of the colleges of pharmacy in the country. The Student Section ties together all of the Student Branches for the common betterment of the individual unit and thereby demonstrates the national character of student affiliation. The parent organization is fully cognizant of the tremendous value of the Student Branch movement by providing a national standing committee to assist the students in their own Branches, regional meetings of Branches, and in the Student Section. This Committee on Student Branches, which is composed of five interested faculty members selected on a geographic basis,[1] provides the liaison between students and the parent organization.

The Committee functions on the philosophy that *vigorously active and productive Student Branches in the colleges of pharmacy should provide for the* ASSOCIATION *a continuous flow of substantial numbers of properly motivated, enthusiastic, and well-informed active members.* Indeed, the ASSOCIATION is dependent upon the colleges for its members. It is the colleges which will determine, in large measure, who and what kind of individuals the ASSOCIATION's members shall be. Operating under this philosophy, the Committee considers the Student Branches as an important, integral phase of the student's educational experience in college. The Student Branch is the means by which the students, individually and collectively, can acquire experience and "know-how" in professional self-government. Professional men and women must assume full responsibility for identifying and enforcing their social and professional obligations and their moral responsibilities and not turn them over to others. The classroom serves to enlighten the student to the existence of such responsibilities, but there must be a place for him to put into practice these elements of self-government as preparation for the life ahead of him after completing his college studies.

Objective of the Student Section

The objective of the Student Section is to breathe life and vitality into the Student Branches. It is hoped that the delegates and representatives who gather once a year in an annual meeting will return to their Branches with renewed vigor and enthusiasm for greater achievement at home. Unless this happens, the Student Section itself will not have accomplished its purpose. It has meaning and purpose only in proportion to the strength it gives the Student Branches themselves. The individual student members must be made conscious of the prestige gained from being a part of a national society which has the respect and acceptance of all other professions represented on a university campus. The Committee on Student Branches thinks the Student Section can achieve this.

The following are the by-laws of the Student Section of the A.PH.A. as amended at the Miami Beach meeting of the A.PH.A., May 1955. Minor amendments passed at the Detroit convention in April 1956 have been referred to the A.PH.A. Council for action.

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* Presented to the Student Section, A.PH.A. Detroit, Convention, April 1956.

† Dean, College of Pharmacy, Rutgers—The State University, Newark, N.J., and Chairman, A.PH.A. Student Branch Committee.

[1] 1956–57 members are Dean Roy A. Bowers, Chairman; Prof. Lyman D. Fonda, Deans John F. McCloskey and Linwood F. Tice, and Dr. Ewart A. Swinyard.

By-Laws of the Student Section of the AMERICAN PHARMACEUTICAL ASSOCIATION

(AS AMENDED AT THE MIAMI BEACH MEETING OF THE A.PH.A., MAY 1955.)

CHAPTER I—NAME AND OBJECTS

Article 1. Name. This organization shall be known as the Student Section of the AMERICAN PHARMACEUTICAL ASSOCIATION.

Article 2. Objects. The objectives of this Section shall be to aid the AMERICAN PHARMACEUTICAL ASSOCIATION in:

1. Promoting the interest of associate members in the AMERICAN PHARMACEUTICAL ASSOCIATION.
2. Bringing together at the annual meeting of the AMERICAN PHARMACEUTICAL ASSOCIATION those students and representatives of Student Branches in attendance for the purpose of discussing matters of common interest and encouraging their participation in the program of the ASSOCIATION.
3. Providing an avenue whereby appropriate resolutions pertaining to student affairs may be submitted to the House of Delegates of the AMERICAN PHARMACEUTICAL ASSOCIATION for its consideration.
4. Strengthening the program whereby associate members, upon their graduation from college, become full members of the ASSOCIATION and continue to participate in its program for the advancement of pharmacy.

CHAPTER II—MEMBERSHIP

Article 1. Membership and Voting. Attendance upon meetings of the Section shall be open to any member or associate member of the AMERICAN PHARMACEUTICAL ASSOCIATION. All associate members in good standing shall automatically be considered members of this Section.

All voting shall be by Branches and each Branch represented at the meetings shall be entitled to one vote.

CHAPTER III—OFFICERS

Article 1. Officers. The officers of the Section shall be a Chairman, a Vice Chairman, a Secretary-Treasurer, a Delegate to the House of Delegates of the AMERICAN PHARMACEUTICAL ASSOCIATION, and three Alternate Delegates to the House of Delegates of the AMERICAN PHARMACEUTICAL ASSOCIATION, each selected from the members of the Section.

CHAPTER IV—ELECTION OF OFFICERS

Article 1. Election of Officers. The Chairman shall appoint, any time before or at the first session of the Section, a nominating committee of three members of the Section. At the final business session of the Section, this committee shall report one nominee for each office to be filled.

Additional nominations may then be made from the floor. Election shall be conducted by ballot according to parliamentary procedure. The elected members shall hold office until their successors are duly elected and installed.

Article 2. Vacancies and Absences from the Annual Meeting. Any vacancies occurring among the officers shall be filled by the Chairman. In the event of the death, resignation, or absence from the annual meeting of the Chairman, the Vice Chairman shall assume the duties of that office. In the event that neither the Chairman nor Vice Chairman can attend the Annual Meeting, a Chairman *pro tem* shall be appointed to preside by the Chairman of the Committee on Student Branches of the AMERICAN PHARMACEUTICAL ASSOCIATION. In case of absence of the Secretary-Treasurer from the Annual Meeting, he shall send his report and material to the Chairman of the Section before the Annual Meeting. The Chairman shall then appoint a Secretary-Treasurer *pro tem* who shall read the report and otherwise carry on the duties of the Secretary-Treasurer during the meetings of the Section.

CHAPTER V—DUTIES OF THE OFFICERS

Article 1. Duties of the Chairman. The Chairman shall preside at the business sessions of the Section and shall perform the customary and parliamentary duties established by usage. He shall also assist the Secretary-Treasurer in his duties of arranging the program for the Section at the Annual Meeting.

Article 2. Duties of the Vice Chairman. The Vice Chairman shall preside at those sessions of the Section when the Chairman is either absent or temporarily incapacitated.

Article 3. Duties of the Secretary-Treasurer. The Secretary-Treasurer shall keep a record of all meetings of the Section, retain copies of the records and documents of the Section and shall transmit these records to the incoming Secretary-Treasurer of the Section. Immediately after the Annual Meeting, the Secretary-Treasurer shall transmit to the Secretary of the AMERICAN PHARMACEUTICAL ASSOCIATION, for publication and safe keeping, the minutes of each meeting, together with all documents, reports and papers which belong to the Section. He shall transmit to the Secretary of the AMERICAN PHARMACEUTICAL ASSOCIATION the names of the officers elected and the committees appointed, as well as any changes in the personnel of the committees.

He shall send to the members such notices as the business of the Section may require.

Prior to the Annual Meeting, he shall mail to the members of the Section a request for papers and an announcement of the latest date on which they will be accepted for presentation at the Annual Meeting.

He shall, as Secretary-Treasurer, prepare and deliver to the Section an annual report of the activities of his office.

He shall collect the Section dues, transact the fiscal affairs of the Section, pay necessary Section expenses, and keep a record of the finances of the Section.

He shall prepare and transmit the annual report of the Section to the House of Delegates.

CHAPTER VI—COMMITTEES

Article 1. Committees. The following committees shall be appointed by the Chairman of the Section at the first session of the Section at the Annual Meeting:

1. Committee on Nominations
2. Committee on Resolutions
3. Auditing Committee
4. Committee on Constitution and By-Laws

Student Section Officers 1956–57. *Seated (left to right): David A. Hill, University of Cincinnati (Vice Chairman); Joann J. Johnson, University of Kansas City (Secretary-Treasurer); and Donald J. Miller, University of North Carolina (Chairman). Standing: Jack N. Frost, University of Southern California (alternate delegate); Van Rosa, University of Arkansas (alternate delegate); James M. Gentry, University of South Carolina (delegate); and Dave Millar, University of Buffalo (alternate delegate). (1956 Convention.)*

Article 2. Committee on Nominations. The Committee on Nominations shall present a ballot giving one nominee for each office of the Section at its last session at the Annual Meeting.

Article 3. Committee on Resolutions. The Committee on Resolutions shall study the recommendations presented in reports and/or by members of the Section and suggest action to be taken on these by the Section.

Article 4. Auditing Committee. The Auditing Committee shall audit the accounts of the Secretary-Treasurer and make its report at the last session of the Section.

Article 5. Committee on Constitution and By-Laws. The Committee on Constitution and By-Laws shall study and formalize the notices of any amendments presented in accordance with Chapter IX, Article 1, and suggest action to be taken on these by the Section.

CHAPTER VII—MEETINGS

Article 1. Time of Meeting. The Annual Meeting of the Section shall be held at the same time and place as that of the Annual Convention of the AMERICAN PHARMACEUTICAL ASSOCIATION.

Article 2. Duration of Sessions and Quorum. The program shall be planned so as to limit each session, if possible, to not more than three hours. Fifteen members shall constitute a quorum.

Article 3. Number of Sessions. The number of sessions to be held at any one Annual Meeting shall be determined by the Secretary-Treasurer in cooperation with the Secretary of the AMERICAN PHARMACEUTICAL ASSOCIATION. The sessions shall be so arranged that they will conflict as little as possible with sessions of other Sections, and that no session shall be held simultaneously with any General Session of the AMERICAN PHARMACEUTICAL ASSOCIATION.

CHAPTER VIII—EXPENSES

Article 1. Appropriations. Appropriations provided by the AMERICAN PHARMACEUTICAL ASSOCIATION to the Section shall be used only to defray expenses for which the appropriation is made.

Article 2. Dues. There shall be no dues required of individual members of the Section but each Student Branch of the AMERICAN PHARMACEUTICAL ASSOCIATION will be asked to make a contribution of $10.00 (ten dollars) *per annum* in support of the Section.

Article 3. Expenses of Officers. Where considered expedient and necessary, the expenses of the Chairman and the Secretary-Treasurer incurred in attending the Annual Meeting would be paid from the funds of the Section. This expenditure shall be subject to the approval of the Secretary and General Manager of the AMERICAN PHARMACEUTICAL ASSOCIATION.

CHAPTER IX—AMENDMENTS

Article 1. Amendments. These By-Laws may be amended at any business session of the Section at the Annual Meeting by a two-thirds vote of the members present, provided notice of such amendment is given together with the text thereof at any previous session held at that Annual Meeting.

Amendments may also be approved by mail ballot by two-thirds of those voting. Amendments must finally be accepted by the Council of the AMERICAN PHARMACEUTICAL ASSOCIATION as not in conflict with the Constitution and By-Laws of the AMERICAN PHARMACEUTICAL ASSOCIATION.

CHAPTER X

Article 1. Miscellaneous. Questions not specifically covered by these By-Laws must always be decided in accord with the Constitution and By-Laws of the AMERICAN PHARMACEUTICAL ASSOCIATION.

Research in Colleges of Pharmacy

by Archie M. Palmer*

DESPITE heavy teaching loads and the pressure of other demands on the time of faculty and staff, there is currently a considerable volume of significant research activity in the Colleges of Pharmacy. A survey of current medical and pharmaceutical research in medical schools and Colleges of Pharmacy in this country and Canada now being made by the author under a grant from the Lasdon Foundation reveals that no less than 800 separate research projects are in progress—and many more are in contemplation—in 60 of the 75 accredited Colleges of Pharmacy.

In some instances the research is limited to the interests of individual professors, while in others it is part of extensive institutional programs. Many of the projects are conducted by members of the faculty and advanced students under contract with and grants-in-aid from Government agencies, foundations, pharmaceutical houses, other industrial organizations, state and regional associations, individuals and institutional funds.

The projects cover a wide range of subject matter. Some are basic in nature; others relate to the synthesis and pharmacological evaluation of specific drugs. At a number of colleges the development and usefulness of new drugs, compounds, and derivatives are being investigated. At several institutions studies of economic and operational problems of the drug trade and of the history and practice of pharmacy are being conducted. At one school a series of studies is being made of various aspects of pharmaceutical education.

The findings of these research projects, except when subject to prior contractual arrangements with the sponsors, are generally given wide dissemination through publication in professional journals and through papers presented before scientific societies. The interchange of the results of these research activities contributes not only to the advancement of pharmaceutical education and practice but to the alleviation of suffering and the cure and prevention of disease.

The following listing of some of the projects currently in progress is indicative of the extent and character of research activity in the Colleges of Pharmacy. Awareness that a particular subject is under investigation and knowledge of where information can be obtained concerning the progress and results of the investigation can prevent unnecessary and expensive effort and loss of time on the part of other investigators and expedite productive research in the field.

* Director, Patent Policy Survey, National Academy of Sciences–National Research Council, Washington, D.C.

Synthesis of thymol derivatives for fungicidal activity
Preparation of a polycyclic nitrogen hetero compound
Comparison of the ester and amide linkage on the diuretic activity of mercurial diuretics
Synthesis and pharmacological evaluation of derivatives of methylene citric acid
Hydroponic growth of selected alkaloidal bearing plants in the presence of various concentrations of antibiotics
Standardization of physical properties in pharmaceutical semisolids
Drug enzyme interactions
Relationship between electronic configuration of pharmacophores and biological activity
Pharmacological studies on xanthine derivatives
Thiomalic acid derivatives
Preparation and bioassay of analogs of biotin
Toxicity, suspending and emulsifying properties of sapote gum
Derivatives of alkoximino acids and of DDD
Preparation of purine-9-glycosides and of isoquinolines
Effect of *p*H upon the peroxide producing ability of zinc oxide
Adsorption studies on sulfuric acid treated bentonites
Use of aerated silica gel as a dispersant in pharmaceutical suspensions
Separation of amino acids by high voltage electrophoresis
Synthesis of organo-substitution products of phosphine
Synthesis of esters of thioboric acid
Solubilization of barbituric acid derivatives by means other than salt formation
Preparation of a series of theophylline derivatives
Synthesis of analgesics and antispasmodics
Studies in structure of phlobatannins
Preservation of aqueous sorbitol solutions
Sterilization and sterility testing of oleaginous parenterals
Stability of cyanocobalamin (Vitamin B_{12}) in the presence of sucrose, dextrose and sorbitol
Adsorptive capacities of various clays for bacterial toxins
Solubility of sorbitol in hydroalcoholic solutions
Sterilization of corn oil
Effect of various tranquilizing agents on gastric acid secretion
Pharmacological evaluation of a new barbituric acid derivative
Effects of ascorbic acid and hesperidin upon experimentally induced gastric ulcers
Comparative study of the antitussive activity of various demulcent agents
Evaluation of suspensions using electrokinetic measurement
The hydrophil-lipophil balance of some pharmaceutical emulsifiers and the theory of mixed emulsifying agents
Rheological properties of pharmaceutical dispersions
Effect of various substances on the disintegration of tablets
Comparative study of the effect of various types of surfactants on the release of labeled medicaments from modified hydrophilic ointment bases
Determination of the uniformity of dispersion of a radioactive isotope in tablets
Kinetics of degradation of tetracaine hydrochloride
Polarographic study of certain chloroethylamines and ethyleneimine derivatives
Gastrointestinal absorption of various iron compounds
Synthesis of radiographic opaques
Pharmacology of a new series of organic nitrates
Metabolism of glycolic acid in liver
Amino acid decarboxylase activity in alkaloid producing plants
Phytochemical investigation of *Cynoglossum officinale*
Determination of organic bases in chlorobenzene
Effect of ultrasonic vibration on the electromigratory rates and antiseptic activity of some suspended medicinals
Sunscreen lotions containing silicone oils
Stability and shelf life of glucose solutions
Blood coagulating principles from *Ceanothus americanus*
Pharmacology of some nucleotides and nucleosides
Effect of certain drugs on nonprotein sulfhydryl concentration and their relationship to cancer
Effects of reserpine and 5-hydroxytryptamine(serotonin) upon certain central nervous system functions

Survey of Tranquilizing Drugs

The sum of $2,000,000 was appropriated by Congress specifically for studies in the field of mental health within the National Institute of Mental Health, which will establish for this purpose a Psychopharmacology Research Center under Dr. J. O. Cole at NIMH. The American Psychiatric Association, the National Academy of Sciences–National Research Council Division of Medical Sciences and NIMH held a Conference on the Evaluation of Pharmacotherapy and Mental Illness at the Hotel Statler, Washington, D.C., September 21 and 22, in order to obtain guidance concerning the use of these funds. Some 700 biochemists, psychiatrists, neurophysiologists, sociologists, legislators, executives, and many other experts participated. For three days and nights just prior to the Conference itself some 100 of these nationally known experts worked in committees to prepare papers and ideas for presentation at the Conference.

According to Dr. R. W. Gerard, Conference Chairman, the general philosophy which will guide the NIMH will be that a few drugs carefully selected should be tested completely and thoroughly, using the most efficient methods available to obtain positive results. Manufacturers would, therefore, be expected to submit only very promising drugs for study by PRC. In approaching new drugs three questions would be asked: Do they act? How do they act? What are the consequences of extensive use? He said we have not yet found the correct elements in the mental sphere and that progress will only be made when correct entities have been identified and recognized and concepts properly evaluated and coordinated.

Reports were read by Dr. Louis S. Goodman (Chairman, Committee on the Preliminary Screening of Psychotherapeutic Drugs), Dr. Louis Lasagna (Recorder of the Committee on Test Commissions), Dr. John Clausen (Chairman, Committee on Patient Selection and Control Problems), and Dr. Milton Greenblatt (Chairman, Committee on the Evaluation of Change in Treated Patients).

From the reports it became evident that no clear-cut, acceptable steps are now established for the screening of psychochemicals or for study of their behavioral toxicity. From the Conference emerged a new concept whereby the classical notions of toxicity were extended to embrace behavioral toxicity, which includes such effects as interference with learning, perception, and discrimination. At present the moral and legal responsibility for clinical evaluation of tranquilizers rests, in the final analysis, on the clinician, and the general feeling appeared to be that clinical data currently being submitted are inadequate. The marketing of "me too" tranquilizing drugs and the release of such drugs on the basis of poor clinical data were scored by Dr. Goodman.

Dr. Barbara Moulton of the FDA pointed out during the final open discussion that:

1. The FDA is charged primarily with the safety of new drugs and not their efficacy. In order to dispute false claims the FDA is faced with long drawn out legal action which is expensive and time consuming.

2. Both the pharmaceutical industry and the FDA must depend on the medical profession for their clinical data. These are frequently reported very poorly and even the best possible logical analysis which can be made by the FDA often leads to unsatisfactory interpretations.

3. The average physician does not realize that when he accepts a product for study labeled "for investigational use only" he implies to the FDA that: (a) he knows the safety of the product in the dose and for the use indicated on the label has not been proven; (b) he considers himself a qualified expert to evaluate the drug clinically; and (c) he promises to submit full reports.

4. Drugs are not released by the FDA on the basis of being totally safe in all doses, in all conditions, but only upon the basis of the dosage recommended and for the conditions indicated on the label. Anything beyond that requires that it be placed in New Drug status.

Dr. Seymour S. Kety, Director of Research of both the National Institute of Mental Health and the National Institute for Neurological Diseases and Blindness, concluded the Conference with a summary and recommendations for allocation of funds as follows:

1. To basic research, development of methodology, initiation of pilot studies, and coordination of cooperative research programs.

2. To pharmaceutical manufacturers, physicians, and investigators to study toxic effects on behavior and mental function.

3. To PRC to arrange for conferences of selected investigators to prepare minimum criteria for toxicity assessment in clinical trials and for standards of efficacy.

4. To finance channels of communication including annotated bibliographies, news letters, conferences, reviews, and various types of publications.

The importance of tranquilizers to the public is appreciated when one realizes that 3 out of every 10 prescriptions in the high frequency category being dispensed today are for such drugs.

AMERICAN PHARMACEUTICAL ASSOCIATION ANNOUNCES OFFICERS ELECTED TO SERVE IN 1957–58

Pharmacy College Dean Becomes New A.Ph.A. President

Officers of the AMERICAN PHARMACEUTICAL ASSOCIATION are elected by a mail ballot participated in by all members in good standing. The votes are counted by a Board of Canvassers appointed by the President, and the results are certified to the Secretary in due course.

The Board of Canvassers met September 7 and 8, 1956, at Washington, D.C., to count the votes cast in the election of officers for installation at the 1957 Convention. The Board of Canvassers included Harry C. Zeisig, Chairman, Francis S. Balassone, and Noel E. Foss.

Officers Elected

The following officers were elected and will be installed at the annual Convention in New York City, the week of April 28, 1957:

President-elect
Joseph B. Burt, of Lincoln, Nebr.; pharmaceutical educator and Dean.
First Vice President-elect
J. Warren Lansdowne, of Indianapolis, Ind.; manufacturing pharmacist.
Second Vice President-elect
Leroy A. Weidle, Sr., of St. Louis, Mo.; practicing pharmacist.
Members-elect of the Council for a term of three years:
Roy A. Bowers, of Newark N. J.; pharmaceutical educator and Dean.
Grover C. Bowles, of Memphis, Tenn.; hospital pharmacist.
John B. Heinz, of Salt Lake City, Utah; practicing pharmacist.

Officers Serving

The present officers of the AMERICAN PHARMACEUTICAL ASSOCIATION, elected by mail ballot, who will continue to function through the New York City Convention, April 28–May 3, 1957 are:

President
John A. MacCartney, Detroit, Mich.
First Vice President
Ronald V. Robertson, Spokane, Wash.
Second Vice President
John J. Dugan, New Haven, Conn.

The Honorary President is elected annually, and the Secretary and the Treasurer are elected triennially by the House of Delegates.

Honorary President
F. W. Nitardy, Brooklyn N. Y.
Secretary
Robert P. Fischelis, Washington, D. C.
Treasurer
Hugo H. Schaefer, Yonkers N. Y.

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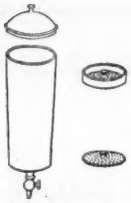

1. Dean's percolator described in British *Pharmaceutical Journal* of August 1st 1841.

Tools of the Apothecary

8. DRUG PERCOLATORS

*By George Griffenhagen**

2. Original 18th cent. "cafetiere a la Du Belloy" or French drip coffee pot.

It appears that the great medical reformer Paracelsus (1493–1541) introduced the process of extraction into medicine as a means of obtaining the essentials of drugs in a concentrated form. There were preparations we would call extracts used in medicine before Paracelsus but they were, according to Urdang, produced largely by accident, and it was Paracelsus who popularized the use of extracts, calling them "quintessences."

In 1672, Charas defined extraction as a "separation of the more pure and most essential parts of Medicaments from the gross and terrestrial by means of some proper Menstrum." Extracts were most commonly made by distillation or by evaporation "over a gentle fire, or in the Sun." The reader is referred to Forbes' definitive study for a review of distillation equipment employed by the apothecary and chemist.

Early methods of extracting vegetable drugs with water eventually led to the process known as percolation or displacement. The practice of exhausting wood-ashes of their soluble alkaline salts by pouring water upon them after introduction into a wooden tub with a perforated bottom (called a leech tub) or into a conical-shaped wooden vessel (called a lye-hopper) is an ancient one. Similar "leeching" processes were used in "claying" sugar and in "sparging" beer. As early as 1746, Garaye advocated the extraction of powdered vegetable drugs with water but it is not known whether he actually adopted the method.

Shortly before the beginning of the 19th century, François Descroizilles, an apothecary of Lescure-les-Rouen introduced the French drip coffee pot; and with the assistance of Abbé Du Belloy, who lent his name to the invention, both amassed a fortune with their "cafetière à la Du Belloy." The "cafetière" consisted of a cylinder with holes in its base which was filled with coffee; boiling water was poured over the coffee, and the percolate was collected in the lower portion, as in Fig. 2. The Du Belloy coffee percolator was never patented and it served as the inspiration for many inventors. One of the most publicized was the 1806 invention of a coffee percolator by Count Rumford.

3. Patent office model of Dursse percolator (1874). Courtesy of the Smithsonian Inst.

4. Late 19th cent. Oldberg percolator first manufactured by Whitall, Tatum.

5. Modern Pyrex percolator assembled for use.

In 1817, a Dr. C. Johnson, "one of the Surgeons of the Lancaster [England] Dispensary" reported on the use of the Count Rumford coffee percolator for making an infusion of cinchona in which boiling water was poured on powdered Peruvian bark in successive portions. There is no evidence, however, that the method gained wide use; nor did Johnson suggest the use of cold water in place of boiling water as a menstrum.

Count Real is credited with having first applied the process of displacement using cold water to the extraction of comminuted dried vegetable products. Real's apparatus, which was designed for the extraction of "coffee, tea, cinchona bark, nut galls, hops, etc., for the purpose of obtaining strong alcoholic tinctures, for the preparation of liquors," was patented in France in 1815. The apparatus consisted of a tin box on a tripod into which was fitted a 50 to 60-ft. high pipe to contain the water which pressed upon the powder in the box forming a "solution press," as it was called (Fig. 9).

Count Real's press seems to have created considerable interest, especially in Germany and Belgium. Büchner

* Acting Curator, Division of Medicine and Public Health, Smithsonian Institution, Washington 25, D.C., and consultant to the A.PH.A. Museum.

regarded the "solution press" as "one of the most important pharmaceutical inventions of the time because it enabled the apothecary to prepare concentrated liquids without the use of heat or exposure to air"; the "solution press" was reportedly made official in all Belgian pharmacies.

On May 2, 1833, at the Pharmaceutical Society of Paris, Mr. Boullay, a Parisian pharmacist, reported on the Real filter "as being little used, no doubt because of its inconveniences." In place of the Real press, the Boullays (father and son) recommended an apparatus resembling the "cafetière à la Du Belloy." According to the Boullays, the apparatus (shown in Fig. 10) may be made of tin or porcelain. At the very same meeting, Pierre Jean Robiquet, co-discoverer of caffeine in 1821, exhibited a glass apparatus "designed to operate as indicated by Mr. Boullay," shown in Fig. 7. A controversy subsequently developed between Boullay and Robiquet regarding the priority of the use of the drug percolator. It appears that Robiquet had used a glass percolator for the extraction of cantharides with ether as early as 1825. However, the Boullays made it clear that their only claim to the process was its application to a large number of medicinal substances which otherwise were altered by prolonged evaporation.

The work of the Boullays and Robiquet soon attracted attention in England, where Henry Dean devised the apparatus shown in Fig. 1. Augustine Duhamel, first in America to report on the new method of extraction, described it in 1838 as "the neatest, simplest, most expeditious, and productive." The following year, William Procter, Jr., joined Duhamel in a study of the process. Noting that the process had already been made official in the *Codex Pharmacopée Française* in 1835, Duhamel and Procter made a plea for its acceptance into the U.S.P. The process was accepted as an alternate method for making tinctures in the 1840 revision. Subsequent development of percolation was largely due to the work of Procter, Grahame, and Squibb, particularly from 1845 to 1875.

In 1849, Procter's *Practice of Pharmacy* described the typical metallic percolator of Boullay. However, Procter noted, "in the absence of a metallic cylinder, an earthenware sugar loaf mould may be conveniently used." In 1856, Parrish described the following types of percolators (or displacers as he called them): "the common *tin displacer;* the *Queensware displacer;* the *common funnel; lamp-chimney displacer,* the smaller end covered with a piece of gauze;

(*Continued on page 678*)

▲ 6. Lower left corner shows two American hand-blown percolators. In Stabler Leadbeater Apoth. Shop.

◀ 7. Robiquet's glass percolator dates from 1833.

8. Early American hand-blown example in Bringhurst Apothecary Shop, Mystic Seaport, Conn. ▶

◀ 9. Count Real's solution press utilizing a 50-ft. high water pipe was patented in France in 1815.

10. The Boullays introduced this percolator at the May 1833 Pharm. Society meeting in Paris. ▶

11. Manufacturing percolators of 1876 are on exhibit at Lilly's Indianapolis museum. ▼

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Book Reviews

Drug Topics Red Book

1957 ed. Published annually by the Topics Publishing Co., Inc., New York

Delivery of the 1957 *Drug Topics Red Book* began in August. It is enclosed in a new special weatherproof mailing carton to provide extra protection during shipment. The new edition includes prices and sizes of over 150,000 drug store products, including many new ethical specialties.

This useful publication, established in 1897, contains not only product information but also acts as a pharmacist's daily reference and a sales and merchandising aid.

In this edition 14,388 new items are added; there have been 23,362 changes in product listings; there are 1,507 product description advertisments; some 412 new companies have been added to the list of drug trade manufacturers; and a very important part of the book is the listing of 6,029 manufacturers with correct names and addresses.

Immunization Information

By the U.S. Department of Health, Education, and Welfare. Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C. (June 1956). 61 pp. 25¢.

This booklet is prepared for the convenience of persons planning to travel abroad. Americans travel abroad more than the nationals of any other country and while traveling are apt to pick up diseases that have been eradicated in the United States. Thus they may endanger not only their own health but the health of persons in the countries they visit and on returning home the health of fellow citizens. This booklet gives information on vaccination requirements of foreign countries, vaccination requirements for entrance into the United States, other immunizations required for the traveler's own protection, the international vaccination certificates, and yellow fever vaccination centers. Further information on vaccinations and personal health precautions while abroad may be obtained from the Epidemiology and Immunization Branch, Division of Foreign Quarantine, Public Health Service, Department of Health, Education, and Welfare, Washington 25, D.C. Pharmacists should keep a copy of this booklet on hand and be able to pass the information along to their customers.

Pharmaceutical Formulas, Vol. II

11th ed. Published at the offices of The Chemist and Druggist, London (1956). xv + 952 pp. $5.90 (42 shillings).

This publication was first issued as a single volume in 1898 but after nine editions was subdivided into two volumes in 1929 because the quantity of information to be compiled made the single volume unwieldy.

Vol. II of the current series covers a wide range of subjects. In the pharmaceutical field are formulas for pastilles, lozenges, veterinary products and dental preparations. In the field of foods are included formulas for candies, household sauces, ketchups, flavors, etc. Cleaning materials, polishes, varnishes, lacquers, adhesives, writing materials, pest exterminators, and agricultural preparations are among the items used in the household for which numerous formulas are provided. Perfumery and cosmetics, including skin lotions, preparations for the hands and nails, the hair, and other toilet preparations, are also covered. There is also a section on photographic formulas.

This valuable reference work should be on the shelves of every pharmacy.

Psychopharmacology

Edited by Nathan S. Kline and Winfred Overholser. Publication No. 42 of the American Association for the Advancement of Science, Washington, D.C., 1956. 165 + x pp. 6 x 9.75 inches.

This timely monograph is a useful contribution to the larger field of mental health. It reproduces the material presented at the first major symposium on the use of several new pharmaceuticals in controlling and treating mental disease. The symposium was organized by the Section on Medical Sciences of the A.A.A.S. and the American Psychiatric Association. The collected papers considered clinical observations and psychiatric applications of chlorpromazine and reserpine, also the pharmacology of these drugs and the mechanism of action of lysergic acid diethylamide, serotonin and mescaline.

Investigators contributing to the sympsoium reported studies undertaken at Veterans Administration Hospital, Palo Alto, Calif.; Herrick Memorial Hospital and the A. E. Bennett Neuropsychiatric Research Foundation, Berkeley, Calif.; the University of California School of Medicine and the Langley Porter Clinic, Department of Mental Hygiene, State of California; Manhattan State Hospital; Biological Laboratories, Cold Spring Harbor, N.Y.; Baylor University College of Medicine, Houston, Tex.; Rockland State Hospital, N.Y.; College of Physicians and Surgeons, Columbia University; Central Island State Hospital, N.Y.; and Marcy State Hospital, N.Y.

This monograph will be of interest to neuropharmacologists, psychiatrists, physiologists, psychologists, neurologists, and medicinal chemists, as hallucinogens and their antagonists are considered from the viewpoints of all of these medical scientists.

BOOKS, PAMPHLETS, AND REPORTS

1957 Pharmacy State Board Questions and Answers

By Ralph J. Mill, College of Pharmacy, Wayne State University, Detroit, Mich. Clark & Wilson Co., Detroit (1956).

Pharmacognosy

2nd ed. By Robertson Pratt, University of California College of Pharmacy, and Heber W. Youngken, Jr., University of Washington College of Pharmacy. xii + 694 pp. J. B. Lippincott Company, Philadelphia (1956). $10.

Pharmacognosy

3rd ed. By Edward P. Claus, University of Pittsburgh School of Pharmacy. 731 pp. Lea and Febiger, Philadelphia (1956). See announcement on page 669.

Sleep

By Marie Carmichael Stopes. 154 pp. Philosophical Library, New York (1956). $3.

FILMS

The Dark Wave

20th Century-Fox. Produced by John Healy, directed by Jean Negulesco from a story by Eugene Vale. In color and CinemaScope. Running time 23 minutes. Filmed in cooperation with the United Epilepsy Association, "The Dark Wave" is, according to a review in the *Hollywood Reporter*, "an engrossing, finely made picture worthy of the high standards of the studio that made it." Charles Bickford as the doctor presents the situation in warm, human terms.

MEMBERSHIP RECORDS

THE ASSOCIATION EXTENDS A CORDIAL WELCOME TO THE FOLLOWING MEN AND WOMEN WHO WERE ACCEPTED FOR ACTIVE MEMBERSHIP DURING THE MONTH PRECEDING PREPARATION OF THIS ISSUE.

ARKANSAS

Eiden, Frank J., Jr., North Little Rock
Foster, Burl, Sr., Ashdown
Haines, Louis H., Marianna
Walker, S. A., Russellville

CALIFORNIA

Brueckner, Ingeborg M., Pasadena
Hoenig, Sidney J., Pacoima
Karr, Harry, Venice
Peterson, Howen W., Monrovia
Rosh, Samuel, San Diego

DISTRICT OF COLUMBIA

Hedgepath, Peggy T.
McQuirter, Scott, Jr.

IDAHO

Halliwell, Jack P., Pocatello
Ness, Donald J., Boise
Tschetter, Lorraine, Spirit Lake

ILLINOIS

Griffin, John C., East St. Louis
McBride, H. William, Crete
Rush, Clyde G., Centralia
Skelton, Maurice B., Champaign

IOWA

Storbeck, John M., Aurelia

INDIANA

Clark, William F., Terre Haute
Johantgen, Lawrence J., Indianapolis
Kus, Patricia K., South Bend

LOUISIANA

Lowry, Edward S., Norco

MARYLAND

Berman, Frederic T., Baltimore
Schulte, F. W., Jr., Baltimore
Weiner, Solomon, Baltimore

MASSACHUSETTS

O'Neill, John T., Holyoke

MICHIGAN

Burgess, Trueman, Utica
Kirk, James H., Detroit
Pruden, M. James, Royal Oak

MISSOURI

Patel, Chimanbhai P., St. Louis
Schorsch, Jerome J., University City

NEW JERSEY

McCutcheon, George F., Jr., Clark
Southers, Thelma G., Elizabeth
Stritzler, Louis, Ventnor

NEW YORK

Audet, Rose L., Syracuse
Jampol, Harry, Levittown
Peck, Fay, Jr., Albany
Whelan, James F., New York City

OHIO

DeSalvo, Robert J., Toledo

OREGON

Bidgood, James E., Wecoma Beach
Folkestad, C. Walter, Oceanlake

PENNSYLVANIA

Curtis, Samuel W., Claysville
Farber, Albert, Elkins Park
Gardier, Louis A., Scranton
Garrell, Marshall F., Philadelphia
Griffith, Paul L., Wyomissing
Lizenbaum, Theodore, Philadelphia
Madigan, Edward E., Linesville
Rosen, David, Philadelphia
Rouse, Charles A., Herminie
Ruhl, Harry F., Jr., Manheim
Sonsini, Fausto, Philadelphia
Swisher, James M., New Castle
Szarnicki, Edward P., Natrona Heights
Tibbott, Rowland H., Ebensburg
Weidman, I. S., Norristown
Weisgerber, E. Leonard, Philadelphia

RHODE ISLAND

Fricker, Raymond F., Providence

TEXAS

Blake, A. C., Sabinal
Burns, Elton A., Georgetown
Dobbins, James P., Stamford
Friedson, Gilbert E., Fort Worth
Giles, Eugene C., San Antonio
Goldberg, E. J., Marshall
Jenkins, Fred R., Carthage
Jolliff, Gus W., Jr., Wichita Falls
Jones, Edward J., Bellaire
Krieger, Ralph M., Abilene
Mahnken, B. R., Shamrock
Marquez, John, San Antonio
Moreno, Alfredo A., Jr., Beeville
Phillips, James A., Midland
Rainbolt, Tommy R., Vidor
Thompson, Edward E., Houston
Wright, Robert T., Wallis
Yarbrough, Lonnie J., Denton

INTERNATIONAL

Aguilar, Thelma N., Manila, Philippines
Snihura, Irene, Toronto, Ont., Canada

Deceased Members

Arnold, Russell K., Rockford, Ill.
Cameron, Carl O., Oreland, Pa., Dec. 1955
Hillhouse, H. C., Birmingham, Ala., May 2, 1955
Nihan, Raymond D., Rockford, Ill.
Thorne, Edward A., Princeton, N. J.

Dr. Bernard Christensen

DR. BERNARD V. CHRISTENSEN, Dean Emeritus of the College of Pharmacy of Ohio State University, passed away at his home in Columbus, Ohio, September 13 at the age of 71.

Dr. Christensen

Dr. Christensen was born in Westfield, Wis., April 15, 1885, and was a graduate of Stevens Point State Teachers College (1909) and of the University of Wisconsin (1917). He received the degree of Master of Science in 1925 and his Doctor of Philosophy degree, with a major in pharmacy, in 1927 from the University of Wisconsin. He was a registered pharmacist in Wisconsin, and served as instructor in pharmacy at the University of Wisconsin from 1924 to 1927. Thereafter he headed the Department of Pharmacognosy and Pharmacology at the University of Florida, serving from 1933 to 1939 as Director of the School of Pharmacy. From 1939 until his retirement in 1956, Dr. Christensen served as Dean of the College of Pharmacy of Ohio State University.

Dr. Christensen served the AMERICAN PHARMACEUTICAL ASSOCIATION as President in 1941–42, having previously been Chairman of the Section on Education and Legislation and of the Scientific Section of the ASSOCIATION. He also served several terms as a member of the A.PH.A. Council.

A strong advocate for improved basic pharmacy training, Dr. Christensen was active in the American Association of Colleges of Pharmacy, becoming its President in 1948. He was the recipient of the Ebert Prize, awarded by the AMERICAN PHARMACEUTICAL ASSOCIATION for high scientific achievement in his field of pharmacognosy.

Silas J. Sanford

SILAS J. SANFORD, 81, prominent Booneville, N. Y., pharmacist and benefactor, died August 22, 1956, in his home after a long illness. He was graduated from the Albany College of Pharmacy in 1906 and had been engaged in the drug business for more than 50 years. He was a member of the A.PH.A., the Masonic Order since 1896 (Potentate Ziyara Temple, Utica 1935) and numerous civic and service organizations.

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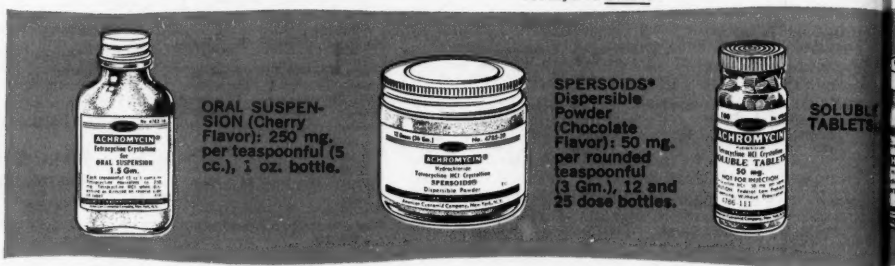
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Tools . . . . . *from page 671*

broken bottles [with] the bottom cracked uniformly off; [and] the *glass displacement funnel.*" The original patent office model of the Dursse percolator of 1874, which was described by Samuel Campbell in 1875 as "the most simple, economical, and perfect instrument of its kind" is shown in Fig. 3. In 1858, Edward R. Squibb introduced the automatic percolator which eventually led to the process of repercolation or "fractional percolation."

In 1880, the U.S.P. fixed the size and shape of the official percolator; it was described as "nearly cylindrical, or slightly conical, with a funnel shaped termination at the smaller end... [and] is best constructed of glass...". But even an official percolator failed to meet with universal approval, and in 1884, Oscar Oldberg reported "all ready-made percolators obtainable in the market to this time are absurd as to their proportions, and should be discarded." The proper percolator, according to Oldberg, was a perfectly cylindrical shape much the same as previously recommended by Stoddard and Tucker of England and Diehl, German-born American pharmacist. Whitall, Tatum initiated the manufacture of the percolator, which became known as the "Oldberg percolator" (Fig. 4).

In 1900, Joseph Remington emphasized the importance of percolation when he wrote, "Fluid extracts would never have evolved had it not been for percolation, and this class of concentrated preparations originating in America will always remain among the most solid achievements of American pharmacy." The present day applications of percolation are reviewed in the latest edition of *Remington's Practice of Pharmacy.* Drug percolators, which are still required equipment of 13 State Boards of Pharmacy, are available today in Pyrex glass in 2000-, 4000-, and 8000-ml. sizes made by Corning Glass Works. Pressed glass percolators in sizes ranging from 1 to 8 pints; blown glass percolators with tubulated tips in 4-pint, 1-gallon and 2-gallon sizes; and graduated glass percolators in similar sizes are produced by Glasco Products.

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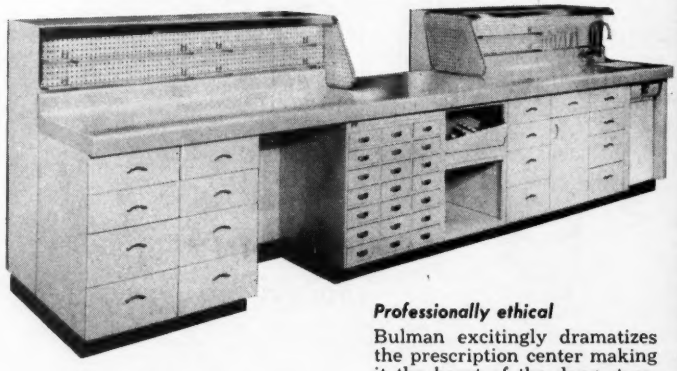

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Vaccination Program

• • • • • • • • • • • • *from page 644*

of the Public Health Service in Atlanta, Ga. All states and territories have collaborated in the program by reporting detailed clinical, epidemiologic, and laboratory data on every case of polio in a vaccinated individual.

During the 1955 poliomyelitis season 22 states and New York City conducted epidemiologic studies to evaluate the effectiveness of the vaccine as a preventive agent against paralytic poliomyelitis. These studies involved over 8,500,000 vaccinated and unvaccinated children. The over-all attack rate among vaccinated children, the vast majority of whom had received only one injection rather than the three prescribed, was only 6.3 per 100,000. Among the unvaccinated, the attack rate was 29.2 per 100,000. Thus the data show that the attack rate among the unvaccinated children was more than 4.5 times the rate among the vaccinated.

The pattern of age distribution of paralytic poliomyelitis last year, as compared with 1952, confirms the results of these special studies. Observation of age-specific rates in 33 states revealed that only among 7- and 8-year-old children was there a sharp lowering of the rates in 1955. These were the children for whom the vaccine had been used almost exclusively last year, under the program of the National Foundation for Infantile Paralysis. Hence this correlation even more convincingly demonstrates the impact of the vaccine.

For the current year the weekly incidence of poliomyelitis has been running well behind that of 1955 and the five-year median. Through July, 1956 had the lowest reported number of cases of poliomyelitis since 1947, within corresponding periods.[1] This is encouraging; however, no definitive conclusions concerning the demonstrated degree of effectiveness this year can be expected until the epidemiologic studies are completed after the close of the 1956 poliomyelitis season.

The Salk poliomyelitis vaccine has demonstrated a remarkable degree of safety. Since May 1955, when vaccine was first released under revised safety standards, there has been no epidemiologic evidence that any case of poliomyelitis has been causally related to the use of the poliomyelitis vaccine. This reassuring conclusion is drawn from the study of data in which each reported case of poliomyelitis is related to the lot number of vaccine used, date and site of injection, site of first paralysis, and dates of onset of the disease and of paralysis.

The program of surveillance is being continued. Careful studies are also being made of the use of vaccine under severe epidemic circumstances. A recent study in Hawaii by the Navy provides strongly suggestive evidence that vaccine can be safely and effectively used during epidemic situations.

[1] An isolated outbreak of poliomyelitis in Chicago has been the only serious contradiction to this. As of September 12, 1,039 cases and 31 deaths were reported for Chicago against last year's totals of 265 cases and 7 deaths for the same period.

SUPPLY, DISTRIBUTION, AND USE

Large-scale production of any new biologic product presents initial technical problems which can be solved only through experience. The problems inherent in the production of Salk vaccine are among the most complex in the field of large-scale biologic preparations. Hence, it was recognized that, even under the most favorable circumstances, demand for the vaccine would probably exceed the supply for a number of months.

As one of the first steps in considering the problem of distributing the vaccine on an equitable basis, a National Advisory Committee on Poliomyelitis Vaccine was appointed. The functions of the Committee were to make recommendations to the Department of Health, Education, and Welfare regarding: (1) the best means of assuring an equitable distribution of the vaccine; (2) the age groups which should be given priority to receive the vaccine because of their greater susceptibility to poliomyelitis; and (3) other broad problems which relate to the distribution and use of the vaccine. The Committee[2] is composed of representatives of the medical and pharmaceutical professions, the public health administration field, and the general public.

From May 1955 to August 1, 1956, a voluntary system of vaccine allocation—developed and established on the recommendation of the National Advisory Committee on Poliomyelitis Vaccine—operated to insure the most equitable possible distribution and use of the limited amount of vaccine then available.

Priority Groups Established

Recommended priority groups have been established by the Department of Health, Education, and Welfare, based on the suggestions of the National Advisory Committee on Poliomyelitis Vaccine. Although states were not required by law or regulation to conform to the recommended priority groups, only a few states have failed to conform—and then only in minor respects.

The 1955 program of the National Foundation for Infantile Paralysis provided for two injections of vaccine for first and second grade school children. This group was given top priority and

[2] The membership of the National Advisory Committee on Poliomyelitis Vaccine as announced by the Secretary of Health, Education, and Welfare on April 27, 1955, includes: Dr. Chester S. Keefer, (Chairman); Dr. Philip S. Barba, American Academy of Pediatrics; Dr. Daniel Bergsma, N. J. State Commissioner of Health; Dr. Robert P. Fischelis, General Manager, A.PH.A.; Mrs. Newton P. Leonard, National Congress of Parents and Teachers; Mr. Frank W. Moudry, N.A.R.D.; Mr. Basil O'Connor, National Foundation for Infantile Paralysis; Dr. Malcolm Phelps, American Academy of General Practice; Dr. Julian P. Price, Trustee of A.M.A.; Dr. George M. Uhl, Los Angeles Health Officer; Mrs. Charles L. Williams, National Congress of Colored Parents and Teachers Association.

the program was virtually complete by Jan. 1, 1956.

The first national priority group established was for children 5 through 9 years of age. As the supply of vaccine increased, the priority group was expanded to include children 0 through 14 and expectant mothers. At the time this article is written, the nationally recommended group includes all persons who are 0 through 19 years of age or who are pregnant.

Distribution System

The voluntary allocation and distribution system had two main segments. The Federal government was responsible for equitable apportioning of available poliomyelitis vaccine among the states in accordance with each state's population in the current nationally recommended priority age group. In allotting each state its proportionate share of the vaccine supply periodically cleared and released by the Public Health Service, a simple formula was followed. The allocation mechanism was based on the number of persons in each state in the federally recommended priority group, in relation to the total number of such persons in the nation. Thus if a state has 5% of the nation's children 0 through 19 years of age and pregnant women, that state was allocated 5% of the vaccine available for release to the states and territories.

State health agencies are responsible for intrastate control of vaccine distribution. Because the problems of distribution and use of vaccine vary from state to state, each state's plan for intrastate distribution and use has been tailored to meet its particular requirements. Every state has appointed a State Advisory Committee to consult with the state health authority in developing its plan. For the most part, state patterns follow those for other types of immunization programs. Allocation of vaccine within each state is based generally on the age priority group population of the local subdivisions. All states have adjusted their initial allocations in accordance with demand, which varies from county to county.

The effective operation of intrastate distribution plans of the states has been made possible largely through the cooperation of the vaccine manufacturers in the pharmaceutical industry. The manufacturers supply each state with copies of invoices covering all shipments into the state, thus providing an up-to-date record of the geographic distribution of vaccine supplies within the state. Weekly reports on receipts and sales of vaccine furnished by retail pharmacists provide a sensitive index to supply and demand by identifying areas in which sales may be lagging. On the basis of this information, the state may adjust its intrastate distribution plan from time to time to meet current problems.

Of the first lots of vaccine released to the states under the voluntary distribution plan, about two-thirds was released for sale to pharmacists and physicians through local distribution channels. As Federal funds became available under the Poliomyelitis Vaccination Assistance Act of 1955, the quantity of vaccine reserved for sale to public agencies—either for use in public clinics or for distribution free to private physicians—has increased to nearly 60%. Throughout the program, the manufacturers have cooperated fully in conforming to the percentages prescribed by the states for the sale of vaccine, and in making necessary adjustments.

Vaccine Needed and Supply Available

The group most susceptible to poliomyelitis in this country (*i.e.*, persons 0 through 19 years of age and pregnant women) totals approximately 65,000,000. If each of these 65,000,000 persons received the prescribed dosage of 3 injections of 1 cc. each, 195,000,000 cc. of vaccine would be required.

Vaccine production had built up slowly through 1955 and the early months of 1956, but releases during April, May, and June brought the supply up to the demand level in a number of states. By August 1, 1956, over 90,000,000 cc. of vaccine had been released—an amount sufficient to provide 2 injections of vaccine for 70% of the eligible persons 0 through 19 years of age and expectant mothers. Because of state variations in the type of immunization programs conducted and the fact that vaccine was now in more plentiful supply, a number of states did not request their shares of recent releases of vaccine. On the other hand, in some areas of the country demand still exceeded available supply. Consequently, on August 1 Federal allocation of poliomyelitis vaccine on a state-by-state basis was terminated in order that the needs of the areas where demand was greatest could best be met. The poliomyelitis vaccination program will now continue with all vaccine being released through normal distribution channels rather than through the Federal system of allocation to the states.

Although the Public Health Service will no longer allocate the vaccine, it will continue several functions which aid the effective distribution of the vaccine. Whenever a new supply of vaccine is approved and released by the Public Health Service, it will continue to notify the states of the amount of the supply and the manufacturer. It will also continue to receive reports from the manufacturers of the geographical distribution of their sales, and will advise manufacturers if an imbalance of supply and demand occurs in any area.

Termination of the allocation system does not affect the age priority groups recommended by the National Advisory Committee on Poliomyelitis Vaccine. Neither does it affect the allotment of Federal funds available to the states for the purchase of poliomyelitis vaccine and the administration of public vaccination programs for

children under 20 and expectant mothers made possible by the Poliomyelitis Vaccination Assistance Act.

Federal Grant-in-Aid Program

Under authority of the Poliomyelitis Vaccination Assistance Act, Congress appropriated $57,800,000 for grants to states and territories for the purchase of vaccine and for the support of poliomyelitis vaccination programs operated by the states and territories. Only $53,600,000 of this appropriation was actually allocated to the states and territories. A reduction in the price of the vaccine to public agency purchasers enabled the Federal government to provide funds to purchase the amount of vaccine prescribed by the legislation with $4,200,000 less than Congress appropriated. Federal financial assistance to the states for purchase of poliomyelitis vaccine and immunization activities will be available until June 1957. As of August 3, 1956, over $28,000,000 had been paid to the states and territories.

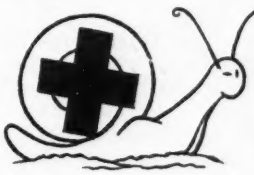
ENFORCEMENT OF FD&C ACT

The Food and Drug Administration of the U.S. Department of Health, Education, and Welfare is responsible for ascertaining that poliomyelitis vaccine shipped into a state in normal drug channels remains in those channels and is sold at the retail level to licensed physicians or on their prescription. During the fiscal year 1956 the Food and Drug Administration carried on an intensive inspectional program to ensure that no irregularities occurred in the distribution of the vaccine. No instances of irregularities in violation of the Federal Food, Drug, and Cosmetic Act were uncovered. During fiscal year 1957 inspectors of the Food and Drug Administration will remain on the alert to follow up on any diversion of poliomyelitis vaccine into nondrug channels.

THE GOAL STILL AHEAD

The immediate challenge is to continue the push to the highest percentage of full immunization attainable—through public clinics and the offices of private physicians. From the long range view, it is equally important that this high level be maintained over the years. Unless this is done, sporadic outbreaks will continue to recur, as has been clearly demonstrated in the history of diphtheria control.

The opportunities for sustained control of all preventable diseases are better today than ever before. More mothers are taking their children to pediatricians, and more clinic services are widely available to the general public. The real task is to see that full advantage is taken of these opportunities.



...but have you seen

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Orientation Courses

• • • • • • • • *from page 659*

Topics Included in the Orientation—The following four general phrases were sometimes used in describing the orientation courses: (1) personal adjustment to college, (2) learning use of the library, (3) learning study habits, and (4) note taking. The more frequently named topics were: (5) history, (6) ethics, (7) literature, (8) history and ethics, (9) opportunities in pharmacy, (10) fundamental processes, (11) techniques, (12) the profession of pharmacy, its aims, etc., (13) duties and responsibilities of pharmacists, (14) survey and guidance, (15) fields of pharmacy, (16) organizations of pharmacy, (17) development of pharmaceutical education, (18) development of pharmacy, (19) laws, (20) commercial aspects of pharmacy, (21) the pharmacist, physician and public, (22) Latin of prescriptions, (23) sociological aspects of pharmacy, (24) current events of importance to pharmacy, (25) health and welfare, (26) services to society.

These topics were casually gleaned from the orientation course descriptions and are, therefore, removed from context. No one course could incorporate all of the subjects but one receives the impression of heterogeneity with respect to pharmacy orientation courses. It may mean, on the one hand, that there are many roads that lead to the orientation of students towards pharmacy, but on the other hand it may symbolize a state of immaturity and confusion as concerns the meaning, purpose, and presentation of the subject of orientation. Our curriculums are badly bungled at this point and it is suggested that the course be deleted from our catalogue requirements or that an acceptable syllabus for it be formulated for all to follow. A student said recently, "I had a course in orientation but I do not know what it was all about." One such testimony is certainly not convincing but it is indicative.

It is also disturbing that the subjects of history, ethics, literature, fundamental processes, and other topics are so casually treated in orientation. These topics are each worthy of a major place in any pharmacy curriculum. These subjects *per se* all have good adjustment value but they are at a great disadvantage when presented in a minor role, as in the usual orientation course. It is true, of course, that some schools offer these subjects again later in the curriculum but others do not.

Descriptions of orientation courses are given in Table II. Like many advertisements and recommendations they do not tell the reader what he really wants to know, because of their brevity and phraseology.

A number of the longer descriptions in Table II include a variety of topics both of a major and a minor educational nature. It is difficult to reconcile the teaching of the solid, basic subjects, processes and techniques in an orientation course. In No. 7, appears the only reference to "assigned readings," but why mix campus life with the profession of pharmacy in this fashion?

TABLE II—TYPICAL DESCRIPTIONS FOR ORIENTATION COURSES

(1) "A survey and guidance course for freshmen"
(2) "Introductory course, including a brief history of pharmacy"
(3) "Required of freshmen in the School of Pharmacy"
(4) "Orientation to pharmacy"
(5) "Pharmaceutical orientation"
(6) "An introduction to the history of pharmacy in all of its aspects"
(7) "A series of lectures and assigned readings to acquaint new students with the university and with the ethics, history, organization, and current events of importance to the pharmacy profession"
(8) "Local, state, and national pharmaceutical organizations, both legislative and educational; the various fields of pharmaceutical endeavor; sociological and historical aspects of pharmacy in relation to other professions"
(9) "An orientation course dealing with the opportunities, ethics, and fundamental literature of the profession of pharmacy; elementary processes and techniques, especially in the laboratory"
(10) "Orientation in pharmacy; a survey of the development of the profession of pharmacy and the literature of pharmacy"
(11) "Modern pharmaceutical practice; relation to other medical professions, and survey of the development of pharmacy"
(12) "A general survey of the field of pharmacy, with emphasis on the fundamental principles and practices"
(13) "A course designed to acquaint the student with the present scope of pharmaceutical practice and to give the student a survey of the historical background of pharmacy"
(14) "An orientation course in the background, origin, ideals, and aims of pharmacy. The course opens with a discussion of contemporary American pharmacy, its professional and trade aspects; its economic structure, the literature of pharmacy, including the *United States Pharmacopeia*, the *National Formulary* and the trade journals; the development of educational standards, associations, and legal controls; the effect of the Civil War on American pharmacy in the young American republic"

Let's Improve the Situation

It is the opinion of the author that, as a whole, the pharmacy orientation courses present a rather sad collegiate spectacle. As now offered, too many of the orientation courses are smatter courses of little value. If these courses are a necessary part of our pharmacy curriculums then they should, by all means, be better organized and more time should be allowed for presentation. If the subject matter for these courses is to be borrowed from other more substantial courses of the curriculum then there is no real justification for them. The situation might be improved by integrating the orientation ideas within the whole of the curriculum because orientation is a dynamic process that goes on and on for most of us.

In a recent paper Williamson[2] of the University of Minnesota described orientation succinctly. He said:

"Orientation, therefore, is not to be viewed as a fixed, pre-education exercise, but rather a fundamental part of the learning process itself within the University context."

[2] *J. Higher Educ.*, **26**, 425(Nov. 1955).

Progress in Medicine

Trivalent Adenovirus (APC) Vaccine Trial

Trials in which 4,000 recruits at a naval training base were inoculated with a single 2-ml. intramuscular injection of formaldehyde-inactivated APC (adenoidal-pharyngeal-conjunctival virus) vaccine, types 3, 4, and 7, and a control group of 12,000 naval recruits was studied, indicate that from 50 to 70% of the expected number of illnesses were prevented by the vaccine. The diseases caused by these viruses resemble grippe or acute feverish respiratory disease and are not of the common cold variety. The report by J. A. Bell *et al.* appeared in *J. Am. Med. Assoc.*, **161,** 1521(Aug. 18, 1956), and the vaccine was prepared by Parke, Davis & Company in cooperation with the National Institutes of Health.

Suntan Pills Still Experimental

The use of 8-methoxypsoralen, methoxsalen N.N.R. (Oxsoralen) as an oral sunburn preventive is still in the experimental stage. Lack of knowledge about the reliability of its action and its toxicity are stressed in an article by Veronica Conley in the August issue of A.M.A. *Today's Health*. The drug is now used in treating vitiligo.

Heatstroke Symptoms and Treatment

Avoidance of further heat exposure when early warning symptoms appear can prevent heatstroke, state Drs. M. G. Austin and J. W. Berry in *J. Am. Med. Assoc.*, **161,** 1525(Aug. 18, 1956). The symptoms, they note, may be present for as long as two to five days and include nausea, vomiting, dizziness, headache, muscle cramps, a feeling of hotness, difficulty in breathing, and decreased sweating. The symptoms of an actual heatstroke are a hot dry skin, absence of sweating, a high fever, and central nervous system reactions ranging from lethargy to coma. Patients with these symptoms are immersed in ice baths and massaged vigorously until the temperature drops to a safer level. Later they receive oxygen, intravenously administered liquids, penicillin to ward off infection, and sometimes drugs to maintain blood pressure at normal levels.

Poison Ivy Susceptibility

Persons born in the Orient or Hawaii show fewer reactions to poison oak patch tests than do American-born groups, according to a report by Drs. E. R. Clairborne and E. Epstein at the June meeting of the A.M.A. at Chicago. Native Chinese gave no reaction, Japanese 3.3%, Filipinos 6.6%, Hawaiians 5.8%. American-born groups showed reactions as follows: Caucasians 58%, Negroes 43.5%, Chinese 45.5%, Japanese 26%, Filipinos 26% ,and Hawaiians 46.8%. The physicians suggest that the Oriental natives might have acquired immunity from mango and lacquer plants, and they suggest that extracts from these plants might immunize susceptible persons against American rhus plants.

Local Injection of Oxytetracycline in Prostatitis

Injection of 500 mg. of intravenous oxytetracycline (Terramycin) preparation in 100 cc. of distilled water directly into the prostate gland, once weekly for 5 weeks, produced excellent or good results in 93 out of 100 cases of prostatitis which had not responded to other forms of treatment. The patients were anesthetized with thiopental sodium during the administration, which is described in a report by M. Mosqueira, *Antibiotic Med. & Clin. Therapy*, **3,** 117(July 1956).

Niacinamide HI in Arteriosclerotic Syndromes

Treatment of 50 cases showing reactions of arteriosclerotic syndrome with Iodo-Niacin ampuls (5 cc. contains niacinamide HI 50 mg., NaI 20 mg., niacinamide 20 mg., dextrose 5%, chlorobutanol 0.45%, and water *q.s.*) caused significant improvement in those signs and symptoms which are partly reversible. The drug was administered twice weekly for 2 months by i.m. or slow i.v. injections of 5 cc., followed by s.c. injection of a smaller dose for 2 months. No iodism or other untoward effects were noted by Dr. T. M. Feinblatt, *et al.*, *Med. Times*, **84,** 741(July 1956).

7-β-Hydroxypropyl Theophylline—Properties

A report on the new theophylline derivative, 7-beta-hydroxypropyl theophylline, in the Annual Report Series No. 43 of the Scientific Research Progress in Mellon Institute 1955–1956, indicates that "this possible replacement for aminophylline is extremely soluble in water to form solutions that are both stable and neutral. It has been used in combination with numerous other medicinal compounds without evidence of any incompatibility." The compound has diuretic activity similar to theophylline as well as bronchodilator activity. Results of clinical tests in bronchial asthma were favorable. 7-β-Hydroxypropyl theophylline appears to be tolerated very well orally and parenterally. 7-β-Hydroxypropyl theophylline resembles, chemically and pharmacologically, the compound 7-(2,3-dihydroxypropyl) theophylline (dyphylline, hyphylline) N.N.R. which is available commercially as Neothylline.

Wanted—Agreement for Marketing Foreign Pharmaceuticals

Important Belgian Dutch laboratory (Brussels-Rotterdam) having a Branch established in the Belgian Congo (Leopoldville) and having two departments entirely distinct ethical specialties and properties would conclude agreement either for marketing foreign pharmaceuticals human, veterinary, phyto field in name and on account principals or as general agent on his own account and responsibility. Up to date processing and packaging equipment for all kinds dosage forms and sizes would be placed at disposal principals as well as promotional and distributing organization or would work under contract on his own account if general agent. Excellent introduction.

General Manager will visit New York and Chicago mid October.

Address Box P-856
American Pharmaceutical Association
2215 Constitution Ave., N. W., Washington 7, D. C.

℞ information service

Members of the American Pharmaceutical Association are invited to submit their professional problems to The Journal, 2215 Constitution Ave., N. W., Washington 7, D. C. Inquiries should include all pertinent details.

Aminophylline, Phenobarbital in Ephedrine Syrup

The following prescription changed from pink to brown in about 10 days. Can you tell us about the compatibility and usefulness of this prescription?—J. R. T., Indiana.

Aminophylline	*60 mg.*
Pentobarbital	*120 mg.*
Syrup ephedrine	*30 cc.*
Water	*30 cc.*

The information submitted did not indicate that pentobarbital sodium and ephedrine sulfate syrup were used. We will assume they were. Ephedrine sulfate syrup is slightly acidic and contains 0.1% citric acid. Aminophylline and pentobarbital sodium form alkaline solutions, and aminophylline reacts with carbon dioxide in the air to liberate theophylline and ethylenediamine. Precipitated matter might adsorb the coloring agent, causing the change from pink to brown. If an unofficial ephedrine syrup were used, the change from acid to alkaline reaction of the mixture might affect the coloring agent.

Inclusion of the small amount of aminophylline in this prescription might raise some question about the therapeutic usefulness of the prescription. However, since all the factors the prescribing physician has taken into consideration are known only to him, he alone could explain the therapeutic rationale of the mixture. Pharmaceutically, the drugs could be prepared in different dosage forms to eliminate unsightly change.

Apomorphine in Wild Cherry Syrup

A young physician writes the following prescription:

Sat. Sol. Potassium Iodide	*20 ml.*
Apomorphine	*2 gr.*
Syrup Wild Cherry q.s.	*120 ml.*

We challenged the presciption on the basis of rationale, the dosage of apomorphine, incompatibilities, and stability. The physician claims he has used the combination for some time as an excellent expectorant for geriatric asthmatics. What is your opinion?—M. B., California.

Apomorphine is infrequently used as the free alkaloidal base which is only slightly soluble. The hydrochloride might be intended and this should be checked with the physician. Although the common use for apomorphine HCl is subcutaneously as an emetic (adult dosage about 5 mg.), it has been used orally for the same action in four to five times the subcutaneous dosage. It has also been used orally in smaller dosage as an expectorant (*The Extra Pharmacopoeia*, 23rd ed., 1952, vol. 1, p. 195). If the dosage of the prescribed syrup is one teaspoonful (5 cc.), the dose of 5.4 mg. of apomorphine HCl is logical.

The tannin in wild cherry syrup could react with the alkaloid. Use of cherry syrup might be suggested. Apomorphine HCl is not very stable in solution. A green color develops on standing, and this is accelerated by air and light. A brown glass dispensing bottle should be used.

Finally, one should not overlook the special group (elderly patients) for whom the physician is prescribing. Try to be as helpful as possible, but remember the physician's claim of excellent results. It would be prudent to contact the pharmacist who previously compounded the prescription to the evident satisfaction of the physician and his patients.

Irgapyrin; Iocylate

Can you give us any information about the drugs Irgapyriñi and Jocylate?—E. J. H., Pennsylvania.

The script in which the drug names are written is foreign and the letter J stands for I. Irgapyrin is an equal-parts combination of aminopyrine and sodium phenylbutazone (Butazolidin, Geigy). It is available as a 30% solution in 5-cc. ampuls, as 0.5-Gm. suppositories, and as 0.25-Gm. tablets from J. R. Geigy A.G., Basel, Switzerland. Iocylate is available from Pitman-Moore Company as tablets containing ethylenediamine dihydriodide, 1/4 gr., and sodium salicylate, 7 1/2 gr., per tablet.

REMEMBER —

IN INSURANCE —

"The Best Buy is *ADI*"

Consult our Agent

NEW Prescription Products

All items on which information has been received in the past thirty days are reported here. Manufacturers are urged to send details of their new products as early as possible, so that pharmacists through these pages will have full information at the same time, or even before, products are detailed to the physician. For inclusion in this department, for which there is no charge, send descriptive literature to the Practical Pharmacy Edition, Journal of the American Pharmaceutical Association, 2215 Constitution Avenue, N.W., Washington 7, D.C.

Cer-O-Streps—One-half, Sterile, and Cer-O-Streps—One, Sterile, for Injection

Description: Vials containing in sterile dry form 2-chloroprocaine penicillin O, 300,000 u.; sodium penicillin O, 100,000 u.; and dihydrostreptomycin and streptomycin (as sulfates), of each 0.25 Gm. for Cer-O-Streps—One-half and of each 0.5 Gm. for Cer-O-Streps—One, buffered with sodium citrate. Diluent (1.5 cc. to the —One half and 2.2 cc. to the —One) is added before use.

Indications: For antibiotic therapy, particularly in patients sensitive to potassium penicillin G or procaine penicillin G.

Administration: Intramuscularly, contents of 1 vial of desired strength.

Form Supplied: One vial in package.

Source: The Upjohn Company, Kalamazoo, Mich.

Compocillin-V Oral Suspension

Description: A banana flavored suspension containing 300,000 u. of hydrabamine penicillin V in each 5 cc. It is stable at room temperature for at least 12 months.

Indications: For infections produced by penicillin-sensitive organisms. Also as prophylaxis in rheumatic fever and rheumatic heart disease.

Administration: Adults, 1 or 2 teaspoonfuls every 4 to 6 hours. Children, by weight and age.

Form Supplied: Bottles of 80 cc.

Source: Abbott Laboratories, North Chicago, Ill.

Eldec Kapseals

Description: Each dark blue capsule with lighter blue band contains: methyltestosterone, 1.67 mg.; theelin, 0.167 mg.; Taka-Diastase, 20 mg.; pancreatin, 133.3 mg.; B_{12} with intrinsic factor conc., 0.033 U.S.P. unit (oral); folic acid, 0.1 mg.; ascorbic acid, 33.3 mg.; ferrous sulfate (exsiccated), 16.7 mg.; vitamin A, 0.5 mg.; B_1 (mononitrate), 0.67 mg.; B_2, 0.67 mg.; B_6, 0.5 mg.; nicotinamide, 16.7 mg.; choline bitartrate, 6.67 mg.; pantothenic acid (as sodium salt), 5 mg.; iodine (as KI), 0.05 mg.; calcium carbonate, 66.7 mg.; *l*-lysine HCl, 66.7 mg.; *dl*-methionine, 16.7 mg.

Indications: Supplement to natural sources of essential vitamins, minerals, gonadal hormones, digestive enzymes, and protein improvement factors.

Administration: One capsule 3 times daily before meals. Females should follow each 21-day course with a 7-day rest interval.

Form Supplied: Bottles of 100.

Source: Parke, Davis & Company, Detroit, Mich.

Mytelase Chloride Tablets

Description: Scored tablets containing in each: 10 mg. or 25 mg. of ambenonium chloride [N,N′-bis-(2-diethylaminoethyl) oxamine bis-2-chlorobenzyl chloride], formerly known as Mysuran chloride (WIN 8077).

Indications: Cholinergic for treatment of myasthenia gravis (chronic progressive muscular weakness without atrophy).

Administration: Since symptomatic warning of overdosage is slight and individual dosage varies widely, great care and supervision are required. For moderately severe cases, orally, 5 to 25 mg. of Mytelase chloride 3 or 4 times daily is effective. Use with caution in patients with asthma or with mechanical intestinal or urinary obstruction.

Form Supplied: Both 10-mg. and 25-mg. tablets in bottles of 100.

Source: Winthrop Laboratories, New York, N.Y.

Nostyn Tablets

Description: Each scored tablet contains 300 mg. of 2-ethylcrotonylurea.

Indications: A calmative that moderates anxiety and tension and avoids depression, drowsiness, and motor incoordination. No evidence of cumulation or habituation has been noted and diarrhea and gastric hyperacidity do not result from the use of the drug.

Administration: Orally, 150 to 300 mg. three or four times daily.

Form Supplied: Bottles of 48 tablets.

Source: Ames Company, Inc., Elkhart, Ind. (See advertisement, page 620.)

Seromycin Pulvules
Seromycin c INH Pulvules

Description: Seromycin Pulvules are two-tone capsules containing, in each, 250 mg. of cycloserine (D-4-amino - 3 - isoxazolidinone). Seromycin c INH Pulvules are capsules containing, in each: cycloserine, 250 mg., and isoniazid, 150 mg.

Indications: In serious cases of pulmonary tuberculosis that have failed to respond to streptomycin, isoniazid, aminosalicylic acid, viomycin, pyrazinoic acid amide, or combinations of these drugs. Contraindicated in patients with histories of psychosis or

epilepsy. Administered with caution and in lower dosage to patients with impaired renal function.

Administration: Initially, one Seromycin Pulvule twice daily at 12-hour intervals for 2 weeks. If blood concentration is below 25–30 mcg./ml. without clinical signs of toxicity increase to one every 8 hours, and if not reached in 2 weeks one every 6 hours may be considered. Blood level determinations should be done 3 to 4 hours after the drug is given. When Seromycin ĉ INH Pulvules are used the dosage is one Pulvule every 12 hours.

Form Supplied: Both Pulvules are supplied in bottles of 40 and 500 to institutions and retail pharmacists on third-party orders.

Source: Eli Lilly and Company, Indianapolis, Ind

Other New Products

(Including chemicals, clinical trial drugs, diagnostic aids, and equipment for the retail and hospital pharmacy.)

Artamide-HC Capsules

Orange and black capsules containing, in each: salicylamide, 250 mg.; *p*-aminobenzoic acid, 250 mg.; ascorbic acid, 20 mg.; and hydrocortisone, 2.5 mg., are marketed by *Wampole Laboratories* for use in acute rheumatic fever and arthritis that do not respond to salicylates alone. Artamide and Artamide with colchicine are available in addition to the new Artamide with hydrocortisone which is supplied in bottles of 100.

Ascorbacent Lozenges

Flavored lozenges containing 100 mg. of ascorbic acid in each, are marketed by *Taylor Laboratories, Inc.*, in bottles of 100 and 1,000.

Bardef Powder

A powder for use with barium sulfate as a deflocculator and containing in each level teaspoonful (approx. 45 gr.): methylcellulose 400, 20 gr.; dried aluminum hydroxide gel, 2 gr.; and sodium lauryl sulfate, 0.22 gr.; is marketed by *Paul Maney Laboratories*. Dosage: orally, 1 heaping teaspoonful (approx. 60 gr.) to 400 Gm. barium sulfate; for enema, 2 level teaspoonfuls (approx. 90 gr.) to 800 Gm. barium sulfate. Doses mixed with liquid in a blender. Supplied in bottles of 4 oz. and 1 lb.

Bentyl Hydrochloride Tablets

Repeat action tablets, each containing Bentyl (dicyclomine) HCl, 20 mg., and phenobarbital, 15 mg. (10 mg. of the dicyclomine HCl is in an enteric coated core) are added by *The Wm. S. Merrell Company* to their capsule, syrup, and injection forms of Bentyl HCl medication for antispasmodic action in control of functional or organic gastrointestinal disorders. Dosage of the new form is 1 tablet 3 times daily with an additional tablet at bedtime if required. The white, unscored tablets are available in bottles of 100 and 500.

Brevicin Lozenges

Lime flavored lozenges containing in each: tyrothricin, 1.25 mg., and benzocaine, 5 mg., are marketed by *Taylor Laboratories, Inc.*, in containers of 100 and 1,000.

Buroplex Liquid

A fruit flavored liquid containing in each tablespoonful (15 cc.): inositol, 100 mg.; choline dihydrogen citrate, 100 mg.; betaine HCl, 100 mg.; nicotinamide, 100 mg.; thiamine HCl, 5 mg.; riboflavin, 3 mg.; iron (as ferric ammonium citrate), 7.5 mg.; pyridoxine HCl, 1 mg.; vitamin B_{12} (activity from cobalamin concentrate), 3 mcg., is marketed by *Burrough Bros. Mfg. Co.*, as a dietary supplement and appetite stimulant especially for elderly patients and during convalescence. Dosage, one tablespoonful twice daily one-half hour before meals. Available in pints and gallons.

Buroplex Plus Capsules

Capsules containing in each: B_{12} with intrinsic factor, 1/3 U.S.P. oral unit, desiccated liver N.F., 100 mg.; folic acid, 2 mg.; ascorbic acid, 75 mg.; thiamine HCl, 10 mg.; riboflavin, 2 mg.; calcium pantothenate, 3 mg.; ferrous sulfate, 150 mg.; brewers yeast, 65 mg.; nicotinamide, 10 mg., are marketed by *Burrough Bros. Mfg. Co.* for treatment of hypochromic and nutritional anemias. Dosage, 1 capsule 3 times daily. Children, 1 to 3 capsules daily according to age. Available in bottles of 30, 100, and 500.

Cluvisol Syrup

A syrup containing essential fat-soluble and water-soluble vitamins, minerals, trace elements, and other accessory food factors is marketed by *Ayerst Laboratories* as a nutrition supplement. Available in bottles of 8 oz. with plastic dispenser and in pints. Cluvisol capsules also are available, in bottles of 100 and 1,000.

Crystalline Vitamin B_{12} Injection

Injectable (s.c., i.m., or i.v.) crystalline vitamin B_{12} for use in osteoarthritis and osteoporosis, and trigeminal neuralgia is marketed by *Barnes-Hind Laboratories* in the following sizes: 1000 mcg./cc. in 10-cc. and in 5-cc.; 500 mcg./cc. in 10-cc.; 100 mcg./cc. in 10-cc.; 50 mcg./cc. in 10-cc.; and 30 mcg./cc. in 10-cc. vial.

Depo-ACTH Sterile Solution—80 U.

A solution for i.m. or s.c. injection containing in each cc.: adrenocorticotropic activity, 80 U.S.P. units, and gelatin, 160 mg., with phenol 0.5% is marketed by *The Upjohn Company*. This product differs from their corticotropin gel containing 40 U.S.P. units per cc. only in having twice the potency. Available in 5-cc. vials.

Diphtheria Toxoid, Plain, 7.5-cc. Vial

A new 7.5-cc. vial (5 immunizations) of diphtheria toxoid, plain, has been made available by *Parke, Davis & Company*, and their 15-cc. vial has been discontinued.

Elixir Harvatrate with Phenobarbital

A solution containing in each fluidounce: atropine methylnitrate (Harvatrate), 6 mg., and phenobarbital, 90 mg., with alcohol 20%, is marketed by *The G. F. Harvey Co.* as an anticholinergic with sedative action. Available in 4-oz bottles, pints, and gallons.

L-Glutavite—New Package

The powder containing L-monosodium glutamate, niacin, vitamin B_1, B_2, and C, ferrous sulfate, and dicalcium phosphate, is now marketed by *Gray Pharmaceutical Co.* in canisters containing 60

teaspoonfuls. Initial dosage is 6 to 10 teaspoonfuls daily with 2 to 6 daily for maintenance. Cartons containing 30 individual dosage packets also are available.

Gran Aerosol

An aerosol preparation containing trypsin, Peru balsam, and castor oil is marketed by *Taylor Laboratories, Inc.*, to promote healing in wounds and burns. Available in 3-oz. containers.

Gyna-Plex Vaginal Cream

A vaginal cream (*p*H 4–5) containing tyrothricin 0.05%, zinc caprylate 5%, and zinc propionate 5%, is marketed by *Rowell Laboratories, Inc.*, for use in control of vaginal infections. Dosage is one applicatorful morning and night (providing 5 mg. of tyrothricin daily). Supplied in 2.5-oz. tube with package of 12 disposable applicators.

Heatex Tablets

Tablets containing in each: ascorbic acid, 100 mg.; sodium chloride (with trace elements), 325 mg.; dextrose, 195 mg., are marketed by *Taylor Laboratories, Inc.*, for prophylaxis against heat exhaustion and prostration. Available in bottles of 100 and 1,000 tablets.

Isuprel Hydrochloride Ampuls 1:5000

Ampuls (1-cc.) containing 1:5000 solution of isoproterenol HCl for parenteral use by cardiologists and for use in prevention and treatment of bronchospasm and laryngospasm during anesthesia are marketed by *Winthrop Laboratories*.

Komfort-Sitz Tub Seat

A light (3 lb.) aluminum Sitz-seat for elevation in bathtub treatment by hydrotherapy and which offers free circulation in the treatment of pre- and post-operative care of pelvic and perineal conditions is marketed by *Will-Mark Mfg. Co.*

Lipo Gantrisin Acetyl

A vegetable oil emulsion containing in each teaspoonful, acetyl sulfisoxazole equivalent to 1 Gm. sulfisoxazole is marketed by *Hoffmann-LaRoche Inc.* One dose is taken in the morning and another at night for 24-hour effect. In severe infections, 3 to 4 doses daily may be used initially. Available in bottles of 4 oz. and 16 oz.

Magna Imitation Vanilla Flavor XXX

As a replacement for pure vanilla extract flavor *Magnus, Mabee & Reynard, Inc.*, has marketed an imitation flavor for use in pharmaceutical preparations and fountain syrups. Magna Imitation Vanilla Flavor XXX is available in pints and gallons.

Mainvite and Mainvite Jr. Capsules

Light green capsules containing in each the daily maintenance vitamin formula of the N.R.C. are marketed by *Taylor Laboratories, Inc.* Their pediatric one-a-day vitamin formula is marketed in yellow capsules. Both forms are available in bottles of 100 and 1,000.

Medihaler-Nitro Inhalation

A 1% aerosol solution of octyl nitrite in an inert propellant in a vial for use only with a Medihaler Oral Adapter is marketed by *Riker Laboratories, Inc.*, for oral inhalation to give temporary relief of angina pectoris. One or two inhalations are given as needed, with a period of 2 minutes between inhalations. Available in 10-cc. vials.

Medrox Tablets

Yellow scored tablets containing in each: methamphetamine HCl, 5 mg. and phenobarbital, 8 mg., are marketed by *Burrough Bros. Mfg. Co.* for use in mild depression states and obesity. Dosage, initially $^1/_2$ to 1 tablet daily, increasing to 3 tablets daily as directed by physician. Best taken one to two hours before meals. Available in bottles of 100, 1,000, and 5,000.

Merlor Ointment

An ointment containing phenylmercuric nitrate 1:1,500 in a hydrophilic base is marketed by *Taylor Laboratories, Inc.*, for use in athlete's foot, ringworm, and bacterial skin infections. Available in 1-lb. jars.

Metandren Tablets 25 mg.

Tablets (yellow, scored) containing 25 mg. of the oral androgen methyltestosterone are marketed by *Ciba Pharmaceutical Products, Inc.*, in addition to their 10-mg. tablets (white, scored); and 5-mg. (white, scored) and 10-mg. (yellow, scored) linguets.

Mol-Iron with Vitamin C Tablets

Small, sugar coated tablets containing in each: ferrous sulfate, 195 mg.; molybdenum oxide, 3 mg.; and ascorbic acid, 75 mg., are marketed by *White Laboratories, Inc.* for oral treatment of iron deficiency anemias. Vitamin C minimizes oxidation of ferrous to less absorbable ferric iron. Available in bottles of 100 tablets.

Monosodium Glutamate Injection

A solution of monosodium glutamate 20% for intravenous use is supplied by *Bruce Parenterals* in 60-cc. vials. Listed indications: "Hepatic coma; cirrhosis of the liver, whereby the kidneys are affected. Inactivates the ammonia in the blood stream."

Mysteclin Suspension

A fruit-flavored corn oil suspension containing in each 5 cc.: the equivalent of 125 mg. tetracycline HCl and 125,000 units nystatin is marketed by *E. R. Squibb & Sons* for antibiotic therapy with prophylaxis against monilial superinfection. Dosage is based on the tetracycline content and for infants and children the daily dosage should supply 10 to 20 mg. tetracycline per pound of body weight, in divided doses. For adults, 1 Gm. of tetracycline daily (2 teaspoonfuls of suspension 4 times daily), with up to 2 Gm. daily in severe or resistant infections. The suspension is stable at room temperature for 18 months and is available in 2-oz. bottles. Also available are Mysteclin capsules (250 mg. tetracycline HCl and 250,000 u. nystatin) and Mysteclin Half Strength capsules (125 mg. and 125,000 u.), both in bottles of 16 and 100.

Neo-Delta-Cortef Ointment—New Tube

The Upjohn Company's ointment containing hydrocortisone acetate 0.5% and neomycin sulfate 0.5% is now available in 20-Gm. tubes.

Otamylon with Hydrocortisone Ear Drops

A combination which mixes to produce a clear viscid liquid containing: Sulfamylon (mafenide) HCl 5%, benzocaine 5%, and hydrocortisone 0.02% in anhydrous glycol, is marketed by *Winthrop Laboratories* for treatment of otitis externa, furunculosis, and otitis media with perforated drum by

NEW *Prescription Products*

topical application. Supplied in a package with dropper—one bottle each of Otamylon (13.4 cc.) and hydrocortisone solution (2 cc.) to be mixed upon dispensing. The mixture is stable for one month at room temperature.

Oxsoralen Capsules for Sun Protection and Tanning

The *Paul B. Elder Company* has recommended to physicians the use of Oxsoralen (8-methoxypsoralen) for sun protection of persons with poor tolerance to sunlight and to aid in sun tanning. Use of the drug for vitiligo was reported earlier: see THIS JOURNAL, 16,32(1955); 17,279(1956). Physicians are supplied with "Patient Instruction Sheets" with the following: "Take two capsules once a day, about 2 hours before going out into the sun. Take the capsules with a glass of milk or after a meal. The first 3 or 4 days that you take the capsules, do not stay in the sun any longer than you could normally without burning (usually 30 minutes or less). Thereafter, each day increase the time you stay in the sun little by little. Never take more than 2 capsules a day. If you take more than 2 capsules a day you may burn and blister. You must follow these instructions exactly. . . . The drug is contraindicated in *all* except healthy adults." The 10-mg. capsules are available in packages of 28 and 100.

Pyribenzamine HCl Anesthetic Jelly
Pyribenzamine HCl Anesthetic Solution

Topical anesthetic forms of tripelennamine (Pyribenzamine) HCl marketed by *Ciba Pharmaceutical Products Inc.* are the jelly (in 1-oz. tubes) and the solution (in 30-cc. bottles).

Reditrin-T Capsules

Capsules containing a high potency hematinic formulation with intrinsic factor and minerals are marketed by *Merck Sharp & Dohme* for treatment of all types of anemias, particularly where immediate therapy is desirable. Dosage is one capsule daily. Supplied in bottles of 30, 100, and 1,000.

Reserlor Tablets

Tablets containing in each, 0.25 mg., 0.5 mg., or 1 mg. of reserpine are marketed by *Taylor Laboratories, Inc.* All strengths are available in bottles of 100 and 1,000.

Romilar Syrup and Tablets—New Strength

The amount of the antitussive *d*-methorphan HBr in *Hoffmann-LaRoche's* Romilar syrup and tablets has been increased from 10 to 15 mg. per teaspoonful or tablet. The dosage schedule remains the same as heretofore: 1 to 2 teaspoonfuls or tablets 1 to 4 times daily.

Sensi-Discs Mandelamine

Discs used to determine susceptibility of urinary pathogens to methenamine mandelate are made by *Baltimore Biological Laboratory* and supplied through laboratory supply houses in vials of 50 discs, each containing 5 mg. of the drug.

Serpasil Elixir—New Strength

A reddish brown, cola-flavored solution containing 1 mg. reserpine in each 4 cc. is marketed by *Ciba Pharmaceutical Products Inc.* in bottles of 1 pint and 1 gallon. The green elixir containing 0.2 mg. reserpine in each 4 cc. is also available in pints and gallons.

Serpasil Tablets 2 mg. and 4 mg.

White, scored tablets containing 2 mg. or 4 mg. of reserpine in each tablet are marketed by *Ciba Pharmaceutical Products, Inc.* Both strengths are available in bottles of 100 and 1,000. Tablets containing 0.1 mg., 0.25 mg., and 1 mg. of reserpine are also available.

Sultriad Tablets

Tablets containing in each: sulfadiazine, 2.5 gr ; sulfamerazine, 2.5 gr.; and sulfacetamide, 2.5 gr., are marketed by *Taylor Laboratories, Inc.*, in bottles of 100 and 1,000.

Surital Sodium 10 Gm. Steri-Vials

Parke, Davis & Company has made available Surital (thiamylal N.N.R.) sodium 10 Gm. in a 500-cc. vial. The short-acting intravenous anesthetic is already available in ampuls containing 0.5, 1, and 5 Gm.; 1-Gm. vials; and for rectal instillation, vials of 1.5 and 3 Gm. containing a green dye to distinguish this from the i.v. form.

Tempogen Tablets

Tablets containing a solid core of prednisolone and ascorbic acid with a compressed outer layer of aspirin and aluminum hydroxide are marketed by *Merck Sharp & Dohme* for treatment of rheumatoid arthritis, bursitis, neuritis, and certain other forms of rheumatic conditions.

Tetrabon Homogenized Mixture
Tetrabon SF Homogenized Mixture

Tetrabon is a fruit flavored, nonalcoholic suspension containing 125 mg. tetracycline in each 5 cc. Tetrabon SF is a fruit-mint flavored, sugar-free suspension containing in each 5 cc.: 125 mg. tetracycline (as HCl salt) with 1/8 of the daily requirement of stress formula vitamins. Both products are marketed by *Pfizer Laboratories* in 2-oz. bottles.

Triethylene Melamine, TEM, Tablets

Tablets containing, in each, 5 mg. of 2,4,6-tris-(ethylenimino)-S-triazine (triethylene melamine, TEM) are packaged by *Lederle Laboratories* in bottles of 12. TEM, which is used in the treatment of some neoplastic diseases, is related chemically to the nitrogen mustards but it can be given orally and causes fewer side effects.

UR-AT Tablets

Tablets containing in each: phenylazodiaminopyridine HCl, 50 mg.; sulfacetamide, 250 mg.; and homatropine methylbromide, 15 mcg., are marketed by *Paul Maney Laboratories* for urinary tract therapy Dosage, 2 tablets 4 times daily, after meals and at bedtime. Supplied in bottles of 100 and 1,000.

Vioform-Hydrocortisone Cream

A water-washable cream containing iodochlorhydroxyquin 3% and hydrocortisone 1% is marketed by *Ciba Pharmaceutical Products, Inc.* for use in the treatment of infectious eczema and other skin ailments including reactions caused by strong washing detergents. Available in 5-Gm. and 20-Gm. tubes.

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*Erythromycin in the treatment of osteomyelitis**

8/3/55

CASE SUMMARY

On 6/2/55, patient, male, age 28, fell on an old fracture and refractured the middle third of the right femur, superimposed on an old osteomyelitis.

On 7/7/55, the wound was saucerized and a hemolytic S. aureus (coag. +) was isolated from the osteomyelitis. Disc sensitivities were: penicillin, 10 units; erythromycin, 10 mcg.; tetracycline, 10 mcg.

On 7/15, the patient was placed on erythromycin therapy 400 mgm. q. 6. h. Patient afebrile after erythromycin started. X-rays showed evidence of healing with callus formation. No septicemia and clinical evidence indicates control of the infection.

On 8/3, the cast was removed and leg recast. Wound was in good condition with minimal drainage.

Diagnosis: fracture middle third of right femur, complicated by osteomyelitis.

Result: erythromycin aided healing of the old osteomyelitis and kept the infection under control.

* *Communication to Abbott Laboratories*

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Otamylon with Hydrocortisone Ear Drops, Winthrop, Oct., 687
Oxsoralen Capsules for Sun Protection and Tanning, Elder, Oct., 687

Pabirin AC Capsules, Smith-Dorsey, July, 484
Pamine Sterile Solution, Upjohn, Jan., 59
Panafil Ointment, Rystan, Sept., 613
Paracodin Bitartrate Ampuls; —Tablets, Bilhuber-Knoll, Sept., 612
Parvex Powder (Vet.), Upjohn, Mar., 196
Paskate Pulvules, Lilly, Aug., 546
Pathilon Parenteral, Lederle, April, 260
Pediatric Abbo-Liter Containers 150 cc., Abbott, April, 260
Perazil Tablets 25 mg., Burroughs Wellcome, Jan., 59
Persistin Tablets, Sherman, July, 484
Pincets Lozenges, Walker, April, 260
Piperone Tablets, Barnes-Hind, Sept., 613
Pipizan Citrate Syrup, Merck S & D, April, 260
Piptal Pediatric Liquid, Lakeside, July, 484
Plastic Blood Pack, Fenwal, April, 260
Poliomyelitis Vaccine, Merck S & D, July, 483
Polycycline Aqueous with Triple Sulfonamides, Bristol, Mar., 196
Polysal Elixir, Cutter, Feb., 123
Pomalin Suspension, Winthrop, Aug., 547
Pradase Tablets, Miller, July, 485
Preludin Tablets, Geigy, Sept., 612
Pre-Natal Capsules—new formula, West-ward, June, 420
Probolic OB Tablets, Barnes-Hind, Sept., 613
Proscomide Capsules, Miller, Sept., 613
Protosil Ointment, Bryant, Aug., 547
Pryme Capsules, Field, July, 485
Pyribenzamine HCl Anesthetic Jelly; —Anesthetic Solution, Ciba, Oct., 688

Radiation Dosimeter, Electromation, Jan., 59
Radio-Pharmaceuticals, Abbott, Sept., 613
Raudonna Tablets, VanPelt & Brown, April, 258
Raurine Tablets 0.5 and 1 mg., Lloyd, Dabney & Westerfield, July, 485
Rauwolfia Serpentina with Veratrum Viride Tablets, Westward, Jan., 60
Rectal Desitin Ointment, Desitin, July, 485
Redifact Forte Elixir, Merck S & D, Aug., 547
Redifact Forte Tablets, Merck S & D Feb., 123
Redifact Tablets, Merck S & D, Feb., 123
Reditrin-T Capsules, Merck S & D, Oct., 688
Releasin Parenteral, Warner-Chilcott, Sept., 612
Renir Tablets, Massengill, Aug., 547; Sept., 613
Renografin Injection (Diagnostic), Squibb, Jan., 60
Reserlor Tablets, Taylor, Oct., 688
Reserpine Alkaloid Tablets, West-ward, Mar., 196
Reserpine Elixir, Bryant, Jan., 60
Reserpine Injection, Phila. Ampoule Labs., Aug., 546
Reserpine T.D. Capsules, West-ward, Aug., 548
Reserpine with Mebaral Tablets, Winthrop, July, 483
Reserpoid Tablets 4 mg., Upjohn, July, 485
Rhulispray Aerosol, Lederle, July, 485
Ritalin Tablets, Ciba, June, 418
Robalate Liquid, Robins, Sept., 613
Ro-Bile Tablets, Rowell, Jan., 60
Romilar Syrup, Tablets, Expectorant—nonlegend, Hoffmann-LaRoche, Sept., 613; —Syrup and Tablets (new strength), Oct., 688
Roxel Elixir, Merck S & D, July, 485
Rutaminal-RQ Tablets, Schenley, Feb., 123

Salimeph-C/Codeine Phosphate Tablets, Kremers-Urban, Jan., 60
Salimeph-C/Colchicine Tablets, Kremers-Urban, Jan., 60
Sandostene Tablets, Sandoz, July, 483
Sandostene+Calcium Injection, Sandoz, July, 483
Sandril Solution and Tablets, 5 mg., Lilly, Feb., 123
Senokot Tablets, Purdue Frederick, Sept., 613
Sensi-Discs Mandelamine, Baltimore Biol. Lab., Oct., 688
Seromycin Pulvules, Lilly, Oct., 685
Seromycin & INH Pulvules, Lilly, Oct., 685
Serpasil Elixir (new strength), Ciba, Oct., 688; —Tablets, 2 mg. and 4 mg., Oct., 688
Serpatilin Tablets, Ciba, June, 418
Serpedon Elixir, Walker, Jan., 60
Silconex Ointment, Hygiene Research, Sept., 613
Silmidate-M with Codeine Tablets, Haskell, Aug., 548
Sippyplex Powder, Purdue Frederick, April, 258
Snake Bite Kit, McDonald, Feb., 124
Solvilith Tablets, Miller, July, 485
Somatovite Tablets, Purdue Frederick, May, 356
Sparine Hydrochloride Tablets; — Injection, Wyeth, May, 356
Steclin Syrup, Squibb, July, 485
Sterane Tablets 1 mg., Pfizer, Mar., 196
Sterisil Vaginal Gel, Warner-Chilcott, June, 419
Stilphostrol Solution, Ames, Feb., 124
Stokes Tablet Hardness Tester, Stokes, Mar., 196
Sulfid B-A Tablets, Columbus, Aug., 548
Sulfid Pediatric Suspension; —Tablets, Columbus Aug., 548
Sultriad Tablets, Taylor, Oct., 688
Suppository Formulations, Suppositoria Labs, Feb., 124
Surital Sodium 10 Gm. Steri-Vials, Parke Davis, Oct., 688

Tarcortin Cream, Reed & Carnrick, Feb., 124; new size, Mar., 196
Tashan Cream, Hoffmann-LaRoche, July, 485
Tempogen Tablets, Merck S & D, Oct., 688
Teolaxin Capsules, Maney, Mar., 196
Terrabon Homogenized Mixture, Pfizer, June, 419
Tes-Tape for Urine Sugar Test, Lilly, April, 260
Testaldiol Buccal Tablets, Meyer ,Aug., 548
Testavol-S Capsules, Testagar, July, 485
Tetrabon Homogenized Mixture, Pfizer, Oct., 688
Tetrabon SF Homogenized Mixture, Pfizer, Oct., 688
Thalajen Tablets; —Cream, Jenkins, Mar., 196
Theobarb-R Tablets, VanPelt & Brown, Aug., 548
Theracombin Syrup, Bryant, Mar., 196
Thiamine Mononitrate, Free-Flowing, Merck S & D, July, 485
Thiosulfil-A Tablets, Ayerst, Sept., 613
Thiosulfil Solution, Ophthalmic and Nasal, Ayerst, Jan., 60
Thora-Dex Tablets No. 1 and No. 2, SKF, May, 356
Thorazine Suppositories 25 and 100 mg., SKF, Mar., 194
Titralac-SP, Schenley, July, 485
T-Mist Nasal Spray, Norwich, Sept., 613
Tolagesic & Codeine Tablets, Miller, July, 485
Toloxidyne Tablets, Harvey, Jan., 60
Topicort Spray, Roussel, April, 260
Topitracin, Reed & Carnrick, June, 420
Tridal Tablets, Lakeside, Feb., 124
Triethylene Melamine, TEM, Tablets, Lederle, Oct., 688
Trimester Capsules, Haug, Aug., 548
Trinalis Supprettes, Webster, Feb., 124

Tri-Synar Plus Tablets, Armour, Aug., 548
Tritheon Tablets, Ortho, June, 419
Trobex Injection, Testagar, June, 419
Tylandril Tablets, Lilly, April, 259

Unette Dispenser, Unette, Feb., 124
Unicap Therapeutic Tablets, Upjohn, Aug., 548
UR-AT Tablets, Maney, Oct., 688
Uritral Capsules, Central, June, 419

Vanulets Captabs, Bryant, Aug., 548
V-Cillin Pediatric for Suspension, Lilly, Mar., 194
V-Cillin Pulvules 250 mg., Lilly, Mar., 196
V-Cillin-Sulfa Tablets, Lilly, June, 419
Velmol Capsules, Patch, Sept., 613
Vibruden Injection, Phila. Ampoule Labs., Mar., 195
Vi-Mix Drops, Lilly, Mar., 195
Vioform-Hydrocortisone Cream, Ciba, Oct., 688
Vio-Lax Tablets, Rowell, Jan., 60
Vio-Natal Tablets, Rowell, April, 260
Vi-Syneral Vitamin Drops Fortified, U.S. Vitamin, April, 260
Vitamin B_{12} Injection, Crystalline, Barnes-Hind, Oct., 686
Vitamin Candies, West-ward, Sept., 613

Zestamin Captabs, Bryant, Aug., 548
Ziradryl Lotion, Parke Davis, Aug., 548
Zylax Tablets, Glidden, Aug., 548

Listed by Manufacturer

Abbott Laboratories
Aspirin (Aluminum Salt) Dulcet Tablets, April, 259
Calcidrine Syrup, Mar., 193
Compocillin-V Oral Suspension, Oct., 685
Gallimycin Poultry Formula, Aug., 548
Nembudeine Filmtab without Codeine, June, 420
Pediatric Abbo-Liter Containers 150 cc., April, 260
Radio-Pharmaceuticals, Sept., 613
Alcon Laboratories, Inc.
Isopto Carpine Solution 0.25% and 3%, Aug., 547
Isopto Cetamide Solution—new size, Aug., 547
American Cyanamid Company
Aurovim Poultry Powder (Vet.), Aug., 548
Aurovim Swine Powder (Vet.), Sept., 613
Ames Company, Inc.
Clinistix for Urine Sugar Test, Mar., 195
Nostyn Tablets, Oct., 685
Stilphostrol Solution, Feb., 124
The Armour Laboratories
Chymar Injection, Mar., 193
Nitensar Tablets, Sept., 611
Tri-Synar Plus Tablets, Aug., 548
Arnar-Stone Laboratories, Inc.
Americaine Aerosol—new size, April, 259
Lorinal Capsules; —Drops, Jan., 59
Ayerst, McKenna & Harrison Ltd.
Cluvisol Syrup, Oct., 686
Cytoferin Tablets, Jan., 58
Mediatric Tablets, July, 484
Mysoline Suspension, April, 259
Thiosulfil-A Tablets, Sept., 613
Thiosulfil Solution, Ophthalmic and Nasal, Jan., 60
Baltimore Biological Laboratory
Sensi-Discs Mandelamine, Oct., 688
Barnes-Hind Laboratories
Piperone Tablets, Sept., 613
Probolic OB Tablets, Sept., 613
Vitamin B_{12} Injection, Crystalline, Oct., 688
Barrows Chemical Company, Inc.
Mucogel and Mucogel-B-Tablets, Mar., 194
Bilhuber-Knoll Corp.
Paracodin Bitartrate Ampuls;—Tablets, Sept., 612
Boyle & Company
Citra Capsules; —Cough Syrup, July, 483
Braun Laboratories
Lan-O-Let Hand Cleaner, Mar., 195
Bristol Laboratories, Inc.
Neuro-Centrine Tablets, Sept., 611
Polycycline Aqueous with Triple Sulfonamides, Mar., 196
Bruce Parenterals
Monsodium Glutamate Injection, Oct., 687
Bryant Pharmaceutical Corp.
Biocol Cold Capsules, May, 356
Cortomycin Ointment, Aug., 546
Hydrocortisone Acetate Ointment, June, 420
Neomycin Sulfate Ointment, Jan., 59
Protosil Ointment, Aug., 547
Reserpine Elixir, Jan., 60
Theracombin Syrup, Mar., 196
Vanulets Captabs, Aug., 548
Zestamin Captabs, Aug., 548
Burrough Bros. Mfg. Co.
Buroplex Liquid, Oct., 686
Buroplex Plus Capsules, Oct., 686
Medrox Tablets, Oct., 687
Burroughs Wellcome & Company (USA), Inc.
Cortisporin Ointment—new size, Mar., 195
Cortisporin Otic Drops, July, 482
Kemadrin Tablets, Feb., 123
Lanoxin (Digoxin) Products, Sept., 612
Maredox Tablets, Sept., 611
Neosporin Ophthalmic Solution, Jan., 58
Perazil Tablets 25 mg., Jan., 59
Central Pharmacal Company
Neocydex Tablets, June, 420
Uritral Capsules, June, 419
Ciba Pharmaceutical Products, Inc.
Ecolid Chloride Tablets, June, 418
Metandren Tablets 25 mg., Oct., 687
Pyribenzamine HCl Anesthetic Jelly; —Anesthetic Solution, Oct., 688
Ritalin Tablets, June, 418
Serpasil Elixir (new strength), Oct., 688; —Tablets, 2 mg. and 4 mg., Oct., 688
Serpatilin Tablets, June, 418
Vioform-Hydrocortisone Cream, Oct., 688
Columbus Pharmacal Company
Bubartal Sodium Injection, Aug., 545
Gymens Tablets, Aug., 545
Hycodrox Tablets, Aug., 547
Sulfid B-A Tablets, Aug., 548
Sulfid Pediatric Suspension; —Tablets, Aug., 548
Commerce Drug Co., Inc.
Gelcomul Suspension, July, 484
Cutter Laboratories
Polysal Elixir, Feb., 123
Davidson Associates
Conceptulator for Timing Conception, Feb., 124
Desitin Chemical Company
Rectal Desitin Ointment, July, 485
Donley-Evans & Company
Lipo-Diazine Suspension, Jan., 59
Lipo-Triazine Suspension, Jan., 59
Eaton Laboratories, Inc.
Puracin Soluble Dressing—new package, Aug., 545
Paul B. Elder Company
Benoquin Lotion, July, 483
Oxsoralen Capsules for Sun Protection and Tanning, Oct., 688
Electromation Company
Radiation Dosimeter, Jan., 59
Essex County (N.J.) Heart Association
Cardiac Emergency Kit, July, 484
Fenwal Laboratories, Inc.
Plastic Blood Pack, April, 260
Field Laboratories, Inc.
Kradon Tablets, June, 420
Pryme Capsules, July, 485
C. B. Fleet Co., Inc.
Fleet Enema, Aug., 547
The Gebauer Chemical Company
Fluoro-Ethyl Aerosol, Aug., 547
Geigy Company, Inc.
Preludin Tablets, Sept., 612
Otis E. Glidden & Co., Inc.
BSP Liquid, Sept., 612
Zylax Tablets, Aug., 548
Gray Pharmaceutical Co., Inc.
Diovac Syrup; —Pediatric Syrup, July, 484
L-Glutavite (new package), Oct., 686
Grove Laboratories, Inc.
Citroid Compound Capsules, Mar., 195
Haack Laboratories, Inc.
Carbax Tablets, Sept., 611
The G. F. Harvey Company
Angitet Tablets, Sept., 612
Azonamide Tablets, Sept., 612
Elixir Harvatrate with Phenobarbital, Oct., 686
Medylan Tablets, Sept., 612
Mepherin Tablets, June, 418
Nartate Solution; —Tablets, Jan., 59
Toloxidyne Tablets, Jan., 60
Charles C. Haskell & Co., Inc.
Belbarb B Tablets, Feb., 124
Belbarb Trisules Feb., 124
Silmidate-M with Codeine Tablets, Aug., 548
Haug Drug Company
Hescor Tablets, July, 484
Neobile Tablets, July, 484
Trimester Capsules, Aug., 548
Hoffmann-LaRoche Inc.
Alurate Elixir—flavor change, Feb., 124
Asterol Products—nonlegend, Aug., 546
Azo Gantrisin Tablets, May, 355
Lipo Gantrisin Acetyl, Oct., 687
Lorfan Tartrate Parenteral, Sept., 611
Noludar Tablets, Mar., 196
Romilar Syrup, Tablets, Expectorant—nonlegend, Sept., 613; —Syrup and Tablets (new strength), Oct., 688
Tashan Cream, July, 485
Hygiene Research, Inc.
Silconex Ointment, Sept., 613
Isodine Pharmacal Corporation
Isodine Solution, Aug., 547
Jenkins Laboratories, Inc.
Thalajen Tablets;—Cream, Mar., 196
Kimble Glass Company
Opticlear Snap-Cap Vials, Aug., 547
C. F. Kirk Company
Hemomin-Gel Injection, Sept., 611
Kremers-Urban Company
Salimeph-C/Codeine Phosphate Tablets, Jan., 60
Salimeph-C/Colchicine Tablets, Jan., 60

Lakeside Laboratories, Inc.
Caytine—clinical trial in asthma, April, 259
Piptal Pediatric Liquid, July, 484
Tridal Tablets, Feb., 124
Lederle Laboratories Division, American Cyanamid Co.
Achrocidin Tablets, April, 258
Aquavac Infectious Bronchitis Vaccine (Vet.), July, 483
Aquavac Newcastle Disease Vaccine (Vet.), July, 483
Aureomycin Poultry Formula (Vet.) Mar., 195; —Powder, May, 356
Escherichia Coli Diagnostic Serums, June, 419
Pathilon Parenteral, April, 260
Rhulispray Aerosol, July, 485
Triethylene Melamine, TEM, Tablets, Oct., 688
Thos. Leeming & Co., Inc.
Metamine Sustained Tablets 10 mg., Sept., 612
Eli Lilly and Company
Compreu Pulvules May, 356
Cytellin Suspension, Feb., 122
Paskate Pulvules, Aug., 546
Sandril Solution and Tablets, 5 mg., Feb., 123
Seromycin Pulvules, Oct., 685
Seromycin č INH Pulvules, Oct., 685
Tes-Tape for Urine Sugar Test, April, 260
Tylandril Tablets, April, 259
V-Cillin Pediatric for Suspension, Mar., 194
V-Cillin Pulvules 250 mg., Mar., 196
V-Cillin-Sulfa Tablets, June, 419
Vi-Mix Drops, Mar., 195
Lincoln Laboratories, Inc.
Hexadenol—nonlegend, Feb., 124
Lloyd Bros., Inc.
Alu-Scop Capsules; —Suspension, May, 355
Cothamid Suspension, May, 356
Doxinate Capsules 20 mg., —Solution, Feb., 123; —Capsules 60 mg., June, 419
Lloyd, Dabney & Westerfield, Inc.
Mybasal with Dipyrone Capsules, June, 420
Mybasal Tablets. June, 420
Raurine Tablets 0.5 and 1 mg., July, 485
Magnus, Mabee & Reynard, Inc.
Magna Imitation Vanilla Flavor, Oct., 687
Paul Maney Laboratories
Andira Tablets, Aug., 546
Bardef Powder, Oct., 686
B-Telve Tablets, Mar., 193
Cal-O-Nol w/Antihistamine, June, 419
D-Ate Capsules, Mar., 195
Kalnatal Tablets, Aug., 547
Neovar Tablets, Mar., 194
Nika Caps, Mar., 196
Teclavin Capsules, Mar., 196
UR-AT Tablets, Oct., 688
The S. E. Massengill Company
Homagenets Pediatric, Prenatal, and Therapeutic (Vitamins), Jan., 58
Renir Tablets, Aug., 547; Sept., 613
B. F. McDonald Company
Snake Bite Kit, Feb., 124
McNeil Laboratories, Inc.
Butiserpine Elixir, Aug., 546
Flexin Tablets, Mar., 193
Mead Johnson & Co.
Colace Capsules, May, 356; new size, Sept., 612; —Solution, May, 356
Deca-Mulcin Liquid, Mar., 195
Deca-Vi-Caps, Mar., 195
Merck Sharp & Dohme
Albumisol 25% Concentration, July, 482
Aramine Bitartrate Injection, Aug., 545
Cathomycin Capsules, Aug., 545
Co-Deltra Tablets 5 mg., April, 259; —2.5 mg., June, 419
Co-Hydeltra Tablets 5 mg., April 259; —2.5 mg., June 419
Hydeltra Tablets 1 mg., Mar., 195
Hydeltracin Topical Lotion, July, 482
Hydrobalm Topical Cream, Aug., 547
Inversine Tablets, June, 418
Mephyton Tablets, Aug., 547
Pipizan Citrate Syrup, April, 260
Poliomyelitis Vaccine, July, 483
Redifact Forte Elixir, Aug., 547
Redifact Forte Tablets, Feb., 123
Redifact Tablets, Feb., 123
Reditrin-T Capsules, Oct., 688
Roxel Elixir, July, 485
Tempogen Tablets, Oct., 688
Thiamine Mononitrate, Free-Flowing, July, 485
The William S. Merrell Company
Bentyl Hydrochloride Injection (new dosage size), July, 483; —Tablets, Oct., 686
Frenquel Tablets, July, 482; —Injection, Sept., 611
Consol Suspension, April, 258
Meratran Tablets 2.5 mg., July, 484
Meyer and Company (Meyer Chemical Co.)
Almebex Plus B_{12} Elixir, Aug., 546
Almethine Duracap Capsules, Jan., 58
Almetrifon Germicidal Detergent, July, 483
Testaldiol Buccal Tablets, Aug., 548
E. S. Miller Laboratories, Inc.
Anatoid Suppositories, Jan., 58
Pradase Tablets, July, 485
Proscomide Capsules, Sept., 613
Solvilith Tablets, July, 485
Tolagesic č Codeine Tablets, July, 485
National Drug Co.
Hesper-C Liquid, May, 356
Nepera Chemical Company, Inc.
Biomydrin Otic (new formula) Sept., 612
Nopco Chemical Company
Nop-Dry Vitamin A, April, 260
Norwich Pharmacal Company
T-Mist Nasal Spray, Sept., 613
Ortho Pharmaceutical Corp.
Tritheon Tablets, June, 419
Owens-Illinois
Opal Ointment Jars, July, 484
Palo Laboratory Supplies, Inc.
Guth Handi-Mat for Bench Tops, Mar., 195
Olaf Paris, Apothecary
Collapsible Tube Filler, April, 259
Parke, Davis & Company, Inc.
Camoform HCl Tablets, Mar., 193
Diphtheria Toxoid, Plain, 7.5-cc. vial, Oct., 686
Eldec Kapseals, Oct., 685
Surital Sodium 10 Gm. Steri-Vials, Oct., 688
Ziradryl Lotion, Aug., 548
The E. L. Patch Company
Velmol Capsules, Sept., 613
Pfizer Laboratories, Chas. Pfizer & Company, Inc.
Bonadettes Tablets, Aug., 546
Sterane Tablets 1 mg., Mar., 196
Terrabon Homogenized Mixture, June, 419
Tetrabon Homogenized Mixture, Oct., 688
Tetrabon SF Homogenized Mixture, Oct., 688
Philadelphia Ampoule Laboratories
Appetum Chewing Gum Tablets, Sept., 612
Hydrocortisone Acetate Aqueous Suspension, June, 420
Reserpine Injection, Aug., 546
Vibruden Injection, Mar., 195
Pitman-Moore Company
Novahistine with APC, Jan., 59
Novahistine with Penicillin Capsules, April, 258
The Paul Plessner Company
Azodettes Tablets, Sept., 611
Capilon Tablets, Sept., 612
Neo-Ferinex Plus Tablets, Sept., 613
I. E. Princer Pharmaceuticals
Aci-Derma Lotion, July, 483
Purdue Frederick Company
Sippyplex Powder, April, 258
Somatovite Tablets, May, 356
Reed & Carnrick
Dia-Discs For Antibiotic Selection, Jan., 58
Kwell Lotion; —Cream, June, 420
Lullamin Drops, Aug., 547
Senokot Tablets, Sept., 613
Tarcortin Cream, Feb., 124; new size, Mar., 196
Topitracin, June, 420
Riker Laboratories, Inc.
Medihaler-Epi Oral Inhalation, April, 259
Medihaler-Iso Oral Inhalation, April, 259
Medihaler-Nitro Inhalation, Oct., 687
Medihaler Oral Adapter, April, 259
A. H. Robins Company, Inc.
Donnagesic Extentabs No. 1 and No. 2, Aug., 546
Robalate Liquid, Sept., 613
J. B. Roerig & Company, Division Chas. Pfizer & Co., Inc.
Atarax Tablets, July, 482
Roussel Corporation
Topicort Spray. April, 260
Rowell Laboratories, Inc.
Estra-Plex Cream, Feb., 123
Gyna-Plex Cream, Oct., 687
Ro-Bile Tablets, Jan 60.
Vio-Lax Tablets, Jan., 60
Vio-Natal Tablets, April, 260
Rystan Company
Panafil Ointment, Sept., 613
Sandoz Pharmaceuticals
Sandostene Tablets, July, 483
Sandostene+Calcium Injection, July, 483
Schenley Laboratories, Inc.
Rutaminal-RQ Tablets, Feb., 123
Titralac-SP, July, 485
Schering Corporation
Meticortelone Capsules, Jan., 59
Meticorten Capsules, Jan., 59
Meti-Derm Cream, June, 418
Meti-Derm Ointment with Neomycin, Sept., 613
Metimyd Ointment with Neomycin, Sept., 613
Metimyd Ophthalmic Suspension, May, 356
Metreton Nasal Spray; —Tablets, Aug., 546
Schieffelin and Company
C.R.P.A Test Kit, Sept., 612
Sharp & Dohme, *see under* **Merck Sharp & Dohme**
Sherman Laboratories
Persistin Tablets, Sherman, July, 484
Martin H. Smith Company
Ergoval Capsules, Aug., 545
Smith-Dorsey Division, Wander Company
Pabirin AC Capsules, July, 484
Smith, Kline & French Laboratories, Inc.
Cytomel Tablets, July, 482
Thora-Dex Tablets No. 1 and No. 2, May, 356
Thorazine Suppositories 25 and 100 mg., Mar., 194

E. R. Squibb & Sons, Div., Olin Mathieson Chemical Corp.
Deladumone Injection, Feb., 123
Delalutin Injection, July, 482
Florinef-S Ophthalmic Ointment; —Suspension, July, 484
Mysteclin Suspension, Oct., 687
Neomycin-Mycostatin Tablets, Sept., 611
Renografin Injection (Diagnostic), Jan., 60
Steclin Syrup, July, 485
F. J. Stokes Machine Co.
Stokes Tablet Hardness Tester, Mar., 196
R. J. Strasenburgh Co.
Biphetamine Resin Capsules, Feb., 122
Histionex Capsules, Aug., 545
Suppositoria Laboratories
Suppository Formulations, Feb., 124
Sutliff & Case Co., Inc.
Bufazo Capsules, July, 483
Taylor Laboratories, Inc.
Ascorbacent Lozenges, Oct., 686
Brevicin Lozenges, Oct., 686
Gran Aerosol, Oct., 687
Heatex Tablets, Oct., 687
Mainvite and Mainvite Jr. Capsules, Oct., 687
Merlor Ointment, Oct., 687
Reserlor Tablets, Oct., 688
Sultriad Tablets, Oct., 688
Testagar & Company, Inc.
Ascorbacaine Capsules, May, 355
Bismuth Subsalicylate Injection, May, 356
Dipyrone Injection, May, 355
E-Ferol Succinate Capsules 200 I.U., June, 418
Hexatina Tablets, June, 420
Testavol-S Capsules, July, 485
Trobex Injection, June, 419
Texas Pharmacal Company
Dispertar Ointment, Sept., 612
Unette Corporation
Unette Dispenser, Feb., 124
U.S. Standard Products Company
Ascorutin-Bio Tablets, July, 483
U.S. Vitamin Corporation
Aquasol A Cream with Panthoderm, Mar., 195
C.V.P. Capsules and Syrup—nonlegend, U.S. Vitamin, Jan., 58
Duo-C.V.P. Capsules, Aug., 546
Vi-Syneral Vitamin Drops Fortified, April, 260
The Upjohn Company
Albamycin Capsules, Aug., 545
A qua-B with Ascorbic Acid Injection, April, 258
Cer-O-Streps—One-half, Sterile; —One, Sterile, for Injection, Oct., 685
Cordex Forte Tablets, July, 482
Depo-ACTH Sterile Solution, 80 U., Oct., 686
Gelfoam Powder, Sterile, June, 420
Gerizyme, Mar., 193
Neo-Delta-Cortef Eye-Ear Drops 0.25%, June, 418; —Eye-Ear Ointment, June, 420
Neo-Delta-Cortef Nasal Spray, Aug. 547
Neo-Delta-Cortef Ointment, Mar., 194; new tube, Oct., 687; —Drops, April, 260
Pamine Sterile Solution, Jan., 59
Parvex Powder (Vet.), Mar., 196
Reserpoid Tablets 4 mg., July, 485
Unicap Therapeutic Tablets, Aug., 548
Vale Chemical Company, Inc.
Binitrin Tablets, Aug., 546
VanPelt & Brown, Inc.
Raudonna Tablets, April, 258
Theobarb-R Tablets, Aug., 548
Vick Chemical Company
Medi-Mist Nasal Spray, Jan., 59
The Vitarine Co., Inc.
Morphine and Codeine, Injections, June, 420
Walker Laboratories, Inc.
Bacimycin with Hydrocortisone Ointment, Aug., 546
Cortispray Solution, Aug., 546
Geralin Capsules, July, 484
Pincets Lozenges, April, 260
Serpedon Elixir, Jan., 60
Wampole Laboratories
Artamide-HC Capsules, Oct., 686
Warner-Chilcott Laboratories
Releasin Parenteral, Sept., 612
Sterisil Vaginal Gel, June, 419
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